REPORT OF THE COMMITTEE OF THE HIGHLAND SOCIETY OF SCOTLAND ON THE SUBJECT OF SHETLAND WOOL

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REPORT

OF THE

COMMITTEE

OF THE

Highland Society of Scotland,

ON THE SUBJECT OF

SHETLAND WOOL.

Lockwood Greene & Co.

REPORT

OF THE

COMMITTEE

OF THE

Highland Society of Scotland,

TO WHOM THE SUBJECT OF

SHETLAND WOOL

WAS REFERRED.

WITH AN

APPENDIX,

Containing some PAPERS, drawn up by

SIR JOHN SINCLAIR AND DR ANDERSON,

IN REFERENCE TO THE SAID REPORT.

Patrem familiæ bonum agamus; quæ accepimus faciamus meliora; major ista hæreditas a nobis ad posteros transeat. SENECA.

EDINBURGH:

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ADVERTISEMENT.

AT a General Meeting of the Highland Society of Scotland, held at Edinburgh, on Friday the 9th of July 1790, the following reſolution was unanimouſly adopted.

"That the Meeting approve of the meaſures propoſed "by the Directors for the preſervation and continuance of "the Shetland breed of ſheep, ſo remarkable for their "fine wool; and they entirely agree in opinion with "the Committee, that their Report on that ſubject, laid "before the Society, ſhall be printed and publiſhed for "the information of the public; and they remit to the "Committee of Directors to ſuperintend, and give orders "for printing the ſame, with all convenient ſpeed *."

In conſequence of the above reſolution, the Report, with the Appendix, are now printed for the uſe of the Society; and as they relate to a ſubject of great national importance, and intereſting to many other diſtricts of the kingdom, beſides the Highlands, it was thought proper to permit the publication

* The thanks of the Society were, at the ſame time, unanimouſly voted to Sir John Sinclair of Ulbſter, Bart. for the great pains and trouble beſtowed by him on the ſubject of the Report;—to Dr James Anderſon, for the intelligent and ingenious papers written by him, in reference to the ſame;—to Arthur Nicolſon, Eſq. younger of Lochend; and to the Rev. Mr John Moriſon, miniſter of Delting, for the uſeful information they were ſo obliging as to communicate to the ſaid Committee. The Committee of Directors were alſo authoriſed to iſſue precepts on the Treaſurer for the premiums and ſums propoſed by the ſaid Report to be given and advanced.

publication of them, that the information they contain might be more generally made known and circulated.

It may be proper to add, that as there are many individuals who may have material facts or obſervations to communicate reſpecting the wool of the Northern and Weſtern Iſlands of Scotland, or who may be deſirous of contributing to the preſervation and the increaſe of ſo valuable an article among the productions of Great Britain, that any letters addreſſed either to Sir John Sinclair of Ulbſter, Bart. M. P. Convener of the Committee of Directors on this ſubject, or to William Macdonald, Eſq. the Secretary, will be laid before the Society, and properly attended to.

Edinburgh, 24*th Auguſt* 1790.

TO THE

DIRECTORS OF THE HIGHLAND SOCIETY OF SCOTLAND,

THE

REPORT of the Committee to whom the ſubject of SHETLAND WOOL was referred.

IN the inveſtigation of this important ſubject, your Committee was favoured with the attendance of Arthur Nicolſon, Eſq. younger of Lochend, in Shetland; of the Rev. Mr Moriſon, miniſter of Delting in Shetland; and of Dr Anderſon of Cotfield, near Edinburgh, whoſe zealous and public ſpirited attention to the improvement of the Britiſh fiſheries, and to other points connected with the proſperity of this country, is well known to the Society.

It appears to your Committee, from the evidence of theſe gentlemen, that the ſubject recommended to their enquiry is one of the moſt important that could poſſibly be brought under the conſideration of the Highland Society. The number of ſheep in Shetland, it is believed, can-

not be leſs than 100,000, and are probably more. Their fleeces, which, at an average, do not produce above a pound and a half of wool each, is not worth at preſent above ſix pence per pound, or L.3250 in all; whereas the fineſt wool might fetch at leaſt five ſhillings per pound; and conſequently the fleeces of the ſame number of ſheep, if they yielded nothing but fine wool, might be valued at L.32,500, or ten times the above ſum. If the ſame breed were reared in the Hebrides, and in the Orkney Iſlands (where they would thrive equally well), wool might be produced in thoſe neglected parts of Great Britain to the value of perhaps half a million: In proceſs of time, alſo, the ſame ſpecies might be extended to other diſtricts of Great Britain. Your Committee, however, think it proper to remark, that attention to the fineneſs of the wool muſt always diminiſh in proportion as the carcaſe becomes valuable; and, conſequently, that fine-wool'd ſheep are more likely to be preſerved in their higheſt ſtate of perfection, in remote parts of the country, than in the neighbourhood of the metropolis *.

At

* In Dr Anderſon's opinion, the Northern and Weſtern Iſlands of Scotland are peculiarly well calculated for rearing fine-wool'd ſheep: For, in the firſt place, the climate is favourable for

At the ſame time, were the Spaniſh breed of ſheep introduced and multiplied in this country (ſince they produce a ſpecies of wool better calculated than the Shetland for ſome manufactures, particularly broad cloth ‡), and were the importation of Spaniſh wool prohibited, it would ſoon become of more conſequence to attend to the fleece in every part of the kingdom.

From the information of the gentlemen above mentioned, it would appear, that the permanent fineneſs of the wool depends entirely upon the breed of ſheep; for, on the ſame paſture, and in the very ſame climate, ſheep with the

for that purpoſe; in the ſecond place, the quality of the wool would be the object of the farmer, as the carcaſe would be of leſs value; and, in the third place, when a good breed was once obtained, there would be leſs riſk of its being debaſed by improper mixtures, where the ſheep were kept in ſeparate iſlands, than where various breeds were contiguous to each other.

‡ The exact nature, quality, and uſes of the Shetland wool have never been fully aſcertained. It is certainly preferable to any other for ſtockings, and probably for all light woollen manufactures, as ſhawls, waiſtcoats, &c. Perhaps, mixed with Spaniſh, it might alſo anſwer for broad cloth; but it has not perhaps ſtaple ſufficient for that manufacture of itſelf. There can be no doubt of its anſwering for hats, a manufacture that ought to be encouraged in the Highlands, and which even the women in that part of the country might wear, with advantage to their looks and appearance.

the *fineſt* and with the *coarſeſt* wool are maintained; inſomuch that, from the wool of the ſame flock, ſome ſtockings worth *two guineas* per pair, and others worth leſs than *four pence*, are produced.

Your Committee have not been able to collect materials ſufficient for attempting a long inveſtigation into the peculiar nature and qualities of the Shetland breed of ſheep; but they beg leave briefly to ſtate ſome of the moſt important particulars which have come to their knowledge.

1. It would appear that there are two kinds of ſheep producing fine wool to be found in theſe iſlands: One, known by the name of the *kindly ſheep*, whoſe whole body almoſt is covered with it; another, whoſe wool is fine about the neck only, and other particular parts of the body. The colour of the fine wool alſo varies, ſometimes being of a pure white, which is ſuppoſed to be the ſofteſt and moſt ſilky, at other times of a light grey, ſometimes of a black, and ſometimes of a ruſſet colour.

2. The ſheep producing this wool are of a breed, which, for the ſake of diſtinction, might be called the *beaver ſheep*; for, like that animal, many of them have long hairs growing amongſt

amongſt the wool, which cover and ſhelter it; and the wool is a ſpecies of fine fur reſembling down, which grows in ſome meaſure under the protection of the hair with which the animal is covered.

3. Your Committee underſtand that the ſheep producing this fine wool are of the hardieſt nature; are never houſed nor kept in any particular paſture; and that in the winter ſeaſon they are often ſo pinched for food, that many of them are obliged to feed upon the ſea-ware driven upon the ſhore. It is obſerved, however, that the healthieſt ſheep are thoſe which live conſtantly upon the hills, and never touch the ſea-ware.

4. Laſtly, It appears that the Shetland ſheep are never clipt or ſhorn, but that, about the beginning of June, the wool is pulled off (which is done without the ſmalleſt pain or injury to the animal), leaving the long hairs already mentioned, which ſhelter the young wool, and contribute to keep the animal warm and comfortable, at a ſeaſon of the year when cold and piercing winds may occaſionally be expected in ſo northern a latitude *.

Your Committee have the ſatisfaction of adding,

* It is ſaid that theſe long hairs come off later in the ſeaſon, towards the end of September.

ing, that they have reaſon to believe that ſome remains of the ſame breed of ſheep may ſtill be found in the Weſtern Iſlands, and perhaps in ſome of the remoteſt parts of the Highlands, where the native race of the mountains have not been contaminated by a connection and intercourſe with animals of an inferior ſpecies in regard to the quality of their wool, and valuable principally for their carcaſe.

Your Committee will now proceed to ſtate ſome circumſtances, which ſeem to render an immediate attention to this ſubject abſolutely neceſſary.

1. The proprietors of the Shetland Iſlands have ſo much bent their attention to fiſhing, as in a great meaſure to neglect other occupations. No pains therefore has been taken to keep up this valuable breed, or to preſerve it from degenerating. At preſent the different kinds of ſheep are ſo mingled together in almoſt every part of the Shetland Iſlands, that in a very ſhort ſpace of time the fineſt race might become totally extinct, unleſs the opportunity which now fortunately preſents itſelf is ſeized.

Indeed, both in Shetland, and in every part of the country, it ought to be inculcated as much as poſſible, that, by proper attention, the beſt ſort of every ſpecies of animal may be obtained.

obtained. It is well known to what perfection particular kinds of ſheep and cattle, which in their judgment were preferable to every other, have been brought by Meſſrs Bakewell and Culley. In Galloway, polled cattle prevail, to the excluſion of other breeds, becauſe in that country there is a ſtrong predilection in their favour. By attention, Mr Farquharſon of Invercauld, in the very heights of Aberdeenſhire, has obtained, without any foreign aſſiſtance, a breed of cattle, producing the richeſt milk of any in Great Britain; and if the inhabitants of the Shetland, of the Orkney, and of the Weſtern Iſlands, will make a point of it, there is no doubt, that by breeding always from the beſt rams and ewes, and gradually extirpating the inferior ſpecies, the beſt breed of Shetland ſheep may be multiplied with amazing rapidity. The experiments made by M. Le Blanc, and the celerity and ſucceſs with which he has propagated the Spaniſh breed of ſheep in France (an account of which will be found in the Appendix), fully juſtify this aſſertion.

2. In Shetland, as in other places, improvements are attempted with the beſt intentions, which often turn out to be the reverſe. Thus, with a view of mending the Shetland breed, ſome

ſome ſheep from the ſouthern parts of Scotland were lately brought to thoſe iſlands. From ſuch an importation, the Society will eaſily perceive that no improvement in regard to the fineneſs of the wool could be expected. Unfortunately, alſo, the ſheep thus imported were diſeaſed, and have introduced into the Shetland iſlands a diſtemper among their flocks, by which many have already periſhed, and which may prove deſtructive to many more: Nor is it poſſible to ſay to what dreadful extent its ravages may yet be carried.

3. There is reaſon to ſuppoſe that the moſt is not made of the fine wool now produced in Shetland; for though ſome high-priced ſtockings from that country are ſold, yet the price of the wool is in general very low (at an average not exceeding ſixpence per pound); and it is believed, that from inattention, or from ignorance of the art of ſorting the fleece, much fine wool is thrown away, and loſt among the coarſe wool, made into ſtockings of from 3d. to 3s. per pair.

As a proof how little the real value of the Shetland wool is known in that country, your Committee thought it adviſable to have the following experiment tried. They directed ſome of the coarſe Shetland ſtockings, ſold at Edinburgh

burgh for about 5d. per pair, to be purchaſed, and *decompoſed*, or reduced again to wool. The wool, after being carded, was delivered to Mr Izet the hatter, who very obligingly agreed to try how far it might anſwer for the manufacture of hats, both by itſelf, and with a mixture of other wool. The ſtrength of the wool, it is evident, muſt have been much injured by being ſpun and knit, and afterwards untwiſted and decompoſed; yet the wool was found capable of being made into hats, and there is reaſon to believe that the raw material was more valuable than the ſtockings when manufactured.

Laſtly, The Committee are decidedly of opinion, that the fineſt breed of Shetland ſheep might be extended to the other iſlands of Scotland, and in proceſs of time to other diſtricts of Great Britain. On this head, they beg leave to refer to a very ingenious paper drawn up by Dr Anderſon, which will be found in the ſecond number of the Appendix to this Report.

In another paper alſo (ſee Appendix, No. III.) the Doctor has drawn up a plan for eſtabliſhing wool markets, in order to raiſe the value of that article by a competition of buyers; which would probably prove an effectual means of encouraging the production of fine wool in Shetland, and in other parts of Scotland, were proper at-

tention paid to that great and valuable ſource of national wealth and induſtry.

The Committee will now ſubmit to the conſideration of the Directors the meaſures, which, they are humbly of opinion, might be of eſſential ſervice in promoting ſo important an object, as the preſervation and extenſion of this valuable ſpecies of ſheep, the laſt remnant of the ancient breed of Scotland.

1. It ſeems to be very deſirable for the Directors to have ocular inſpection both of the beſt breed of Shetland ſheep, and of the fineſt wool which they produce. For that purpoſe, it is ſuggeſted, that a ſum be laid out from the funds of the Society, in the purchaſe of wool and ſheep, to be ſent by the firſt ſhips from Shetland to Leith. Meſſ. Nicolſon and Moriſon have very obligingly promiſed to lay out the money to the beſt advantage; and Dr Anderſon, who reſides at Leith, has offered to take the ſheep and wool under his care, until they are called for by the Directors.

2. It ſeems proper to have the fulleſt and moſt authentic information reſpecting the hiſtory, the real nature, and qualities of the Shetland ſheep in general, and more eſpecially of thoſe which produce the fineſt wool; and alſo ſimilar accounts of the ſheep of the Weſtern Iſlands, which are ſuppoſed to have been originally the ſame.

ſame. They are of opinion, that the moſt probable means of obtaining this information, would be, for the Society to give an honorary premium for the beſt and approved account of the Shetland breed of ſheep, and alſo for the beſt and approved account of the ſheep of the Weſtern Iſlands. The accounts to contain the fulleſt information that can be procured reſpecting the hiſtory of the different breeds to be found in thoſe parts—the manner in which the the ſheep are in general managed—their food—the quantity, colour, fineneſs, and value of their wool—their diſeaſes, and their cure—and whether the ſheep are folded, houſed, clipp'd, &c.—Their ſize, weight, price at different ages, and the age to which they are in general kept, ought alſo to be mentioned.

3. It would be very deſirable to induce the gentlemen of Shetland to pay every proper attention to their native breed, and to prevail upon them, if poſſible, to confine themſelves to the beſt ſpecies only. They have already proved what they are capable of effecting, by their ſucceſsful exertions in carrying on the fiſheries on their coaſts; and conſiſting, in general, of reſpectable and intelligent individuals, there is no plan recommended by the Society, which they will not probably be diſpoſed to follow, particularly one which would prove equally advan-

tageous

tageous to themſelves, and to their country. With a view, therefore, of directing their attentention, and that of the inhabitants of Shetland in general, to ſo important an object, it is ſuggeſted, that premiums ſhould be given to ſuch proprietors as ſhall keep a parcel of fine-wool'd ſheep in a ſeparate holm or ſmall iſland; and alſo to ſuch perſons as ſhall produce the fineſt-wool'd tups for the improvement of the breed; and that proper judges ſhould be appointed for determining theſe premiums.

For carrying theſe purpoſes into execution, the Committee ſubmit to the Directors the propriety of recommending it to the Society to adopt the following reſolutions.

1. That the Committee of Directors be impowered to lay out a ſum, not exceeding ten guineas, in the purchaſe of ſheep and wool from Shetland, and other places, where the ſame breed of ſheep are ſuppoſed to exiſt.

2. That a premium of five guineas value be given to the perſon who ſhall give in to the Society the beſt and approved account of the Shetland ſheep, with regard to the nature and hiſtory of the different breeds which are to be found there—the manner in which the ſheep are managed—their food—the quantity, colour, and value of their fleeces—their diſeaſes, and the uſual remedies,—and alſo the weight of their carcaſes,

carcaſes, their price at different ages, the age to which they are in general kept, together with any other facts and obſervations which may be judged material.

3. That a like premium be given for a ſimilar account of the ſheep in the Weſtern Iſlands, or any of them.

4. That a premium of five guineas value ſhall be given to any proprietor or inhabitant of the Shetland Iſlands, who, in the courſe of ſummer 1793, ſhall produce the greateſt number of fine-wool'd or kindly ſheep, which have been kept for two years in a ſeparate holm or iſland, ſo as to have no communication with any other ſheep, particularly at the rutting ſeaſon, the number of ſuch ſheep not to be leſs than thirty at the time they are produced.

5. That a premium be given of three guineas for the beſt and fineſt wool'd tup, two guineas for the ſecond, and one guinea for the third, to be produced at each of the following places, viz. Grimiſta near Lerwick, North Brae, and Midyett, at any time to be publicly advertiſed in the different pariſh churches, on or before the 20th of October 1790.

6. That the judges for determining theſe premiums ſhall be Arthur Nicolſon, Eſq. younger of Lochend; the Rev. Mr John Moriſon, miniſter of Delting; Mr Thomas Bolt, factor to Sir

Sir Thomas Dundas; Gideon Gifford of Buſta, Eſq.; Thomas Mouat of Garth, Eſq.; and Mr John Mouat, ſurveyor of the cuſtoms at Lerwick. That any three of them ſhall be a quorum: That they ſhall have power to nominate and aſſume three other perſons to act with them: That Mr Nicolſon be convener; and that they be inſtructed, in judging of the merit of the ſheep, which ſhall be produced to obtain theſe premiums, to attend to the rules laid down by Dr Anderſon, in the paper marked Appendix, No. V. which appears to the Committee to contain many very uſeful practical obſervations.

Laſtly, The Committee ſubmit to the Directors the propriety of encouraging the extenſion of this native breed to other parts of Great Britain, and of trying, in proper ſituations, various experiments reſpecting the nature of their wool, &c. With that view, it might be adviſable to recommend this ſubject to the attention of the Duke of Argyle, the Earl of Breadalbane, Lord Macdonald, Col. Macleod of Macleod, Mr Mackenzie of Seaforth, Mr Macleod of Harris, Mr Macdonald of Clanranald, Mr Macdonald of Boiſdale, Mr Macniel of Barra, Mr Maclean of Coll, Mr Macneil of Colonſay, Mr Campbell of Shawfield, Mr Campbell of Jura, Mr Macniel of Gigha, and the other proprietors in the Weſtern Iſlands,—of Sir Thomas Dundas, Mr Honyman, and Mr Trail,

Trail, in the Orkney Iſlands,—and of the Earl of Moray, and Miſs Scott of Scotſtarvet, in the Forth, all of whom have ſmall holms or iſlands in which this breed might be kept ſeparate from other ſheep; and farther, with a view of denoting the zeal of the Society for attaining this object, it might not be improper to vote an honorary premium to them, in the ſame manner as to the proprietors in Shetland, in the event of their keeping apart a parcel of fine-wool'd ſheep, either of their own breed, or imported from other places.

The Committee cannot conclude without recommending the paper marked, No. IV. in the Appendix to the attention of the Society. In it, Dr Anderſon proves, from the moſt indiſputable authorities, that, in ancient times, the wool of Great Britain was not only greatly ſuperior to the Spaniſh, but was accounted the fineſt in the univerſe. Its preſent degeneracy, therefore, can only be attributed to neglect; and its former excellence may yet be recovered, under the protection of a patriotic Sovereign, by the encouragement of ſuch public ſpirited bodies of men as the Highland Society, and by the exertions of zealous and active individuals, whoſe time cannot be devoted to a more important purpoſe, or yielding more real and permanent ſatisfaction.

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SINCE the preceding Report was ſent to the preſs, the author of it was led to examine the account of the famous Ryeland, or Herefordſhire breed of ſheep, given by Mr Marſhall. (Rural Economy of Glouceſterſhire, vol. ii. p. 233). It is well known that this breed produces the beſt wool of any in England, which, though not fine enough to be an entire ſubſtitute for Spaniſh wool, yet in ſome degree ſupplies its place, and ſells at the rate of two ſhillings per pound, when Spaniſh wool ſells for three. It is ſingular, that in this work, publiſhed in 1789, a ſimilar apprehenſion is ſtated, leſt this excellent breed ſhould be irretrievably loſt, unleſs ſome proper means are ſoon deviſed for its preſervation. The Ryeland breed having been tried, and found to anſwer in the moſt northerly county of Scotland (which the author can aſſert from his own experience), he is perſuaded that they might be introduced with ſucceſs into other diſtricts; and, in particular, he would recommend them to the proprietors of the Weſtern Highlands and Iſlands, as peculiarly well adapted for that part of the kingdom.

APPENDIX.

APPENDIX.

No. I.

An Account of the Experiments made by M. Le Blanc, for improving the Quality of Wool in France.

[Extracted from the Tableau General du Commerce, par M. Gournay, Avocat, voce, *Mareuil-le-Port.*]

IN 1762, M. Le Blanc, Member of the Provincial Aſſembly of Champagne, collected a flock of 300 ſheep, whoſe wool he ſold the ſucceeding year for 410 livres (about L. 17 Sterling). Little ſatisfied with the reſult, he determined to try what could be effected by improving the breed. He procured, therefore, ſome ſheep of a better race from Flanders, Picardy, and the provinces in that neighbourhood; and in three years time he ſold the wool of 300 ſheep for 520 livres, and in ſix years for 680 livres, or L. 28 : 6 : 8.

This ſucceſs was far from ſatisfying his ambition. In 1775, he ſet about procuring ſheep of a ſtill better quality. In 1783, he obtained a ram and two ewes of the Eſcurial breed from Spain, and two rams of the ſame ſpecies from the famous flock of M. D'Aubenton, at Montbard *. From that period, the quantity and the quality of his wool improved ſo much, that the fleeces of 300 ſheep, in 1788, ſold for 2300 livres, or about L. 100 Sterling †.

 The

* M. Le Blanc has ſince been intruſted with a flock of two rams and twenty-eight ewes, of the beſt Spaniſh breed, preſented by the King of France to the Province of Champagne.

† The quantity of the wool, by attending to the proper breed, was ſo much increaſed, that even young rams, of two years old, produced ſix pound two ounces

The experiments made by M. Le Blanc have fully aſcertained, that neither the ſoil, nor the climate, has ſuch influence on the quality of the wool, as is commonly imagined *. France poſſeſſes in her extenſive dominions a great variety of climate, and paſtures of various kinds, calculated for maintaining every ſpecies of ſheep. Yet it is only within theſe few years that it could boaſt of flocks of fine-wool'd ſheep. According to M. Le Blanc, the bad quality of the wool in France, and he might have added, in other parts of Europe, is entirely owing to the inattention and ignorance of the farmer, who, neglecting to preſerve the beſt ſpecies, and to extirpate the bad, inſenſibly ſuffers the moſt valuable part of his property to degenerate and to periſh before him. "Under the hand of an intelligent poſſeſſor (he adds), nature is embelliſhed and brought to perfection; whereas, when left to ignorance and ſloth, it is rapidly degraded."

From the ſame experiments, it appears, that the quality of the wool depends principally upon the male; and that, when the ram is of the beſt ſpecies, the ſecond or third generation always carries the fineſt poſſible wool. It is aſtoniſhing, therefore, with what rapidity any breed might be multiplied and brought to perfection. An hundred rams and a thouſand ewes of the Spaniſh breed, and a proper number of Engliſh ewes, might, in the ſpace of ten years, be increaſed to a million, and might ſupply theſe kingdoms with all the fine wool that it now imports from Spain. For it is to be obſerved, that one ram is ſufficient for fifty ewes at an average; and that the offspring of Engliſh ewes would produce,

ounces of waſhed wool; and as the firſt and ſecond quality of his wool ſold, in 1787, for four livres per pound, it follows, that the fleece of a young ram was worth about 24 livres, or L.1 Sterling.

* M. Le Blanc acknowledges, that the paſture has great influence on the *ſize* of the ſheep, and conſequently that the large ſheep of Flanders and Lincolnſhire would diminiſh in a dry and arid paſture; but the wool which the animal produced would continue nearly the ſame.

produce, in the ſecond or third generation, as fine wool as the original Spaniſh breed.

Theſe obſervations are not only applicable to France and England, but even to Scotland. For M. Le Blanc aſſerts, that the Spaniſh breed is ſuperior to every other for the ſtrength and vigour of the ſpecies, as well as for the excellency of its wool, accommodating itſelf to all climates, and feeding on any paſture. Nor does it require more pains, nor a greater quantity of food, to rear and nouriſh ſheep of a good quality, than of a bad, whilſt the wool produced by the former is above four times more valuable than the latter. There are many parts of Scotland, therefore, particularly ſuch as are not much incommoded with ſnow in the winter ſeaſon, where this breed might be propagated to advantage.

It may be proper to add, that, in the opinion of M. Le Blanc and of other writers, there is no ſenſible difference, in point of quality, between the wool of the Spaniſh ſheep that travel from one part of that kingdom to the other, and of the ſheep that always continue in the ſame place, where equal attention is paid to the breed; and there is reaſon to believe that thoſe annual peregrinations, on which ſo much ſtreſs is generally laid, is owing to neceſſity, and the ſcarcity of food, in conſequence of the multitude of ſheep that are kept together, and not from any idea that a change of paſture, or any continuation of the ſame temperature or climate, is at all eſſential.

Theſe obſervations are not perhaps immediately connected with the original ſubject of the Report, namely the ſheep of Shetland. But they were thought too material to be omitted, and they corroborate the principle therein ſtated, that the quality of the wool depends upon the breed, and not upon the ſoil or climate; and farther proves in how ſhort a ſpace of time 100 rams and 1000 ewes of the beſt breed, with the aſſiſtance of a proper number of ewes of an inferior quality, might repleniſh the Shetland Iſlands with

fine-wool'd

fine-wool'd ſheep, provided a proper plan is followed for that purpoſe.

No. II.

Memorial concerning the Improvement of Highland Wool, preſented to a Committee of the Highland Society of Edinburgh, June 8. 1790. By James Anderſon, LL. D.

THE wool of Great Britain was, for many ages, the fineſt in Europe, and, as ſuch, it ſold at the higheſt price in the manufacturing diſtricts of the Netherlands and Italy. Many are the treaties on record concerning this important branch of commerce, and various are the regulations and political events to which it gave birth. At that time, Spaniſh wool, though valuable, held only a ſecondary and very inferior rank in the mercantile world; and it was only after the effects of many injudicious legiſlative regulations in Britain began to be felt, which, by ſinking the mercantile value of wool, made the *carcaſe* an object of principal concern to the farmer, that Britiſh wool was gradually neglected, and the wool of Spain began to obtain an aſcendency over it. At the preſent time, Spaniſh wool is of a fineneſs ſo far ſuperior to that of England, as not to admit of a compariſon: The conſequence is, that the fineſt cloths, which in every part of Europe uſed formerly to be made of Britiſh wool, are now univerſally made of Spaniſh wool entirely; and England, which, in conſequence of that ſuperiority, eſtabliſhed an unrivalled woollen manufacture, is now obliged to depend entirely on Spain for what ſhare in this manufacture that proud and rival power ſhall be pleaſed to permit. At preſent, Britain pays to Spain on an average of years about 600,000l. *per annum* for wool alone, though her exports of *fine* woollen cloths are greatly diminiſhed.

Theſe

Theſe facts, which cannot be controverted *, ought to make a deep impreſſion on the mind of every real well-wiſher of his country;—and the firſt queſtion that occurs is this,—Is the breed of ſheep that formerly produced ſuch valuable wool ſo entirely loſt as that it cannot at all be found, or is it ſtill in our power to recover it, and by what means? For, ſince it is certain that the ſoil and climate of this iſland did once produce the fineſt wool, it ſeems unneceſſary to ſpend time in proving that it might be once more made to yield it, could the ſame breed of ſheep be recovered, or another of equal value be obtained.

After the moſt diligent enquiry I have been able to make, it ſeems to me highly probable that this fine breed of ſheep is totally and irrecoverably loſt *in England*. The adulterated remains of it ſtill exiſts indeed in the county of Hereford, on the border of Wales; but there, it has been ſo much debaſed by intermixing with other breeds, as to produce wool of a ſtaple, which, though ſtill fine, is far inferior to that of Spain, which it formerly ſo greatly excelled.

In Scotland, it is probable we ſhall be obliged to come to the ſame concluſion. For more than a century paſt, the coarſe-wool'd ſheep have been imperceptibly debaſing this breed, under the name of improving it, ſo that I am inclined to believe, that on the *main-land* of Scotland, the true unmixed breed is now irrecoverably loſt.

In the time of Hector Boethius, this breed of ſheep, we know, was common. In Annandale, Niddiſdale, and Galloway, ſheep of this kind then univerſally prevailed; and though in the greateſt part of theſe diſtricts the *pure* breed be now entirely loſt, ſtill ſome degenerate remains of it are found in ſome of the moſt remote parts of Galloway. In thoſe days the ſame breed of ſheep ſpread over a large diſtrict in the north-eaſt parts of Scotland alſo, extending from the vale of Eſk, on the borders of the county of Angus, to the

* For the proof of this ſee Appendix, No. IV.

the diſtrict of Buchan, in Aberdeenſhire: But at preſent it cannot be found in either of theſe places. No veſtige of this kind of ſheep has been found in Eſkdale for many years paſt: But in the moſt mountainous parts of Aberdeenſhire, it is known, that ſome of theſe ſheep ſtill were to be found tolerably pure, about forty years ago. They are now, however, there alſo ſo much adulterated, as ſcarcely to leave a mark of their former qualities. The ſame may be ſaid of the Weſt Highlands, where, though ſome fine-wool'd ſheep do ſtill remain, yet they are debaſed; and every day adds to the degree of deterioration. Even in the *Weſtern Iſles*, the furor of improvement has ſo generally prevailed, that it is believed none of them contain the breed entirely unmixed, though the ſheep are there leſs debaſed than on the main land; and it is not impoſſible, but by a diligent ſearch there, ſome of them might ſtill be found that have not been much debaſed.

If this breed of ſheep ſtill exiſts entirely unmixed any where, it is in the Shetland Iſles; but, even there, it is upon the very verge of being irrecoverably loſt. A mixt breed very generally prevails in theſe iſlands, and no care is taken to prevent the beſt from being debaſed. Several attempts to *improve*, as it has been called, their breed, by introducing foreign ſheep into theſe iſlands, have been made; and one in particular, of modern date, has been attended with conſequences that threaten to be very fatal. A diſeaſe has been by that means introduced among the ſheep, that has already killed many, and threatens the remainder with deſtruction. Still, however, a conſiderable number are alive. In ſome remote corner among theſe iſlands, where the ſheep have been neglected, it is not impoſſible, but a few individuals of the true fine-wool'd breed may yet be obtained, if proper meaſures ſhall be adopted for diſcovering and preſerving them. The value of that wool is well known. It has been admired by all who have had acceſs to ſee it; but no

attempts

attempts have been made to ſave the breed from entire annihilation. Now is the time, or never; and what object can be more becoming the attention of this Society than the preſervation of a moſt valuable production, that has long been in ſome meaſure peculiar to the Highlands of Scotland! The opportunity is favourable. Two gentlemen are preſent *, who, with an ardour becoming the ancient race of Caledonian patriots, are willing to ſecond the views of the Society to the utmoſt of their power, if theſe views ſhall be directed towards this point; and few, it is believed, with equal good will, have equal ſkill, and equal power to be of ſervice. By their means the breed may be preſerved from total deſtruction; and, were a few of the true breed of fine-wool'd ſheep once obtained, they can be placed, by the favour of an eminent member of this Society †, in a ſituation where the breed cannot be adulterated but by deſign, and where there cannot be a doubt that they will proſper abundantly; where alſo experiments could be made with eaſe for aſcertaining the value of the wool, and means of improving it.

I am happy in having this opportunity of repreſenting to the Society my idea of the importance of this object, and indulge the pleaſing hope, that, from the well known zeal of the Members of this Society for the promoting of every valuable improvement in theſe kingdoms, effectual meaſures will now be taken to preſerve the valuable breed of ſheep in queſtion, and that future ages ſhall not be able to ſay it periſhed through neglect in *our* time.

* Arthur Nicholſon, Eſq. younger of Lochend, and the Rev. Mr John Moriſon, miniſter of Delting, in Zetland.

† The Duke of Argyle.

No. III.

A Memorial, containing ſome Hints for awakening a ſpirit of Induſtry in the Highlands, and Propoſals for eſtabliſhing Markets for Wool in that part of the kingdom.

IT is an undoubted fact, that nothing tends ſo much to excite induſtry as a ready market for the articles it produces, and a fair price proportioned to their intrinſic value.—In every country where ſuch markets abound, induſtry is found to flouriſh; and wherever they are not, the people are indolent, and diſcover a want of energy in all their enterprizes. To this circumſtance we are in a great meaſure to aſcribe the national character of the Dutch for induſtry; and to the ſame cauſe we muſt refer the indolence of the Poles, Ruſſians, Turks, and many other nations. The natives of the Highlands of Scotland experience this misfortune in an eminent degree, which checks the hand of induſtry at home, and gives room for the people being branded with opprobrious epithets, which experience has proved to be entirely groundleſs. Where is the country, I would aſk, in which a native of the Caledonian mountains has acceſs to a ready market, that he does not outſtrip all his rivals, and make money in ſituations where others leſs induſtrious than he are reduced to beggary and want! Give them, therefore, ready markets for the productions of their native wilds, and they will become active and induſtrious, rich and flouriſhing.

Among the few productions of their native mountains, no one article, except live ſtock, is perhaps of greater value than wool; and this promiſes to become from year to year of greater and greater value ſtill. Their climate is peculiarly favourable for producing wool in greater perfection than any other part of Britain; and they poſſeſs natural advantages for improving their breeds of ſheep, and meliorating their wool,

wool, that no other nation in Europe can pretend to equal *. Their remote ſituation, too, renders the cultivation of *wool* of greater importance to them than to the natives of other parts of Britain, becauſe the carcaſe there muſt always be of ſmaller proportional value.

It were vain, however, to expect that ever the natives can be taught to make the proper uſes of theſe ſingular national advantages, unleſs care ſhall be taken to open among them convenient markets for their wool, in centrical and acceſſible places, where the different wool-growers could meet with a variety of rival merchants, who, by their competition, might bring every ſpecies of wool to its fair intrinſic value, and thus enable the wool-growers to judge with preciſion which kind it was moſt their intereſt to rear. This therefore, as an object of the firſt importance, ought to be kept ſteadily in view by thoſe who wiſh to promote the improvement of the Highlands of Scotland, and to excite a ſpirit of induſtry among its people.

At the preſent moment they poſſeſs wool of great value, for which no adequate price can be drawn; it is therefore often applied to uſes that wool of a very inferior quality might anſwer, and of courſe it may be leſs profitable to the grower than wool of a quality greatly inferior. The breeds of ſheep, therefore, which ought to be valuable chiefly on account of their wool, are neglected, and others that are *really* of much inferior value, but which are *accidentally* from this cauſe at preſent more profitable, are preferred in their ſtead.

To remove theſe evils, it appears to me, that one of the firſt enterprizes of this Society ought to be, to eſtabliſh ſome large annual fairs in thoſe parts. Wool is an article there of ſuch importance, and it is to be now had on theſe coaſts in ſuch quantities, and at ſo low a price, as to be an object ſufficient to bring monied men from a diſtance

* See Appendix, No. IV.

for the purpoſe of purchaſing that commodity; and wherever much money is to be got, and many people are brought together, various other articles of general uſe will be produced for ſale. Every perſon, on theſe occaſions, each in his reſpective ſphere, will be induced to bring forward the articles that his ingenuity or induſtry have enabled him to obtain, which he will be diſpoſed to ſell to thoſe who ſhall have occaſion for them. A wool fair, therefore, though it may be nominally ſuch only, will be, in effect, a ſeminary of general induſtry, and lay the foundation of future inſtitutions, that in ſucceeding times may be objects of admiration and envy to ſurrounding nations. Antwerp, which for many ages excelled every other place in the univerſe, owed its origin to a temporary concourſe of people of this ſort; and Leipſig, to this hour, is in a great meaſure ſupported by its annual fair.

Fairs have in general owed their origin to accidental circumſtances, and have therefore, as being detached inſtitutions, been frequently eſtabliſhed in places that were incommodious, and have been held at times that were inconvenient, conſidered in relation to each other. In the preſent caſe, however, ſhould this Society think of encouraging ſome inſtitutions of this nature, it would be becoming the wiſdom of ſuch an auguſt body to plan theſe inſtitutions *in concert*, to uſe the language of Lord Bacon, ſo as they might mutually accord with and ſupport each other, rather than to interfere in any reſpect. They ought, therefore, to be ſo ſituated, in reſpect of *place*, as to be convenient for the inhabitants of large diſtricts around them, and acceſſible to ſtrangers *by ſea*; and ſo arranged, as *to time*, as to allow the ſame perſon to attend the whole of them in rotation, if he ſhould ſo incline.

On theſe principles, I would beg leave to ſuggeſt, with a view merely to give an idea of what might be done in other places, when it might become neceſſary to eſtabliſh

fairs

fairs in them, that at preſent it might be proper to fix on the following places in the ſhires of Argyle and Inverneſs; as the circumſtances of the country ſeem to call for them, and in the following rotation.

At *Tobermory*, in Mull, for the ſouthern diſtrict of the Weſtern Iſles—at *Fort William*, for the extenſive country of Lochaber—and at *Bunaw* and *Inveraray*, each for their reſpective diſtricts of Argyleſhire, now become a conſiderable ſheep country. The rotation in point of *time* might be on the ſame day in each ſucceeding week. *Firſt*, Tobermory—*Second*, Fort William—*Third*, Bunaw—and *fourth*, Inveraray. By this means the ſame *perſon* could not only attend the whole, but the ſame *veſſel* might accompany him to each, to take his goods on board, without being at the expence of warehouſe rent, &c. This might at preſent be done with regard to the three firſt—and were the propoſed canal at Crinan made, the whole of the four might then be included.

It is here unneceſſary to enter into details reſpecting the tolls to be levied at theſe fairs; for this Society is too enlightened not to ſee that tolls, conſidered as an article of *profit*, ought to be entirely excluded, though, if theſe tolls are extremely moderate, conſidered as a mean for aſcertaining the progreſs of improvement, they might have their uſe. The Society, if ever they ſhall come to think ſeriouſly on this ſubject, will alſo ſee the neceſſity of obtaining ſome alterations with reſpect to laws that at preſent tend to check the tranſporting of wool and other productions and manufactures of thoſe iſlands, from place to place, concerning which it would be here improper to enlarge.

The only apology I make for taking up ſo much of the time of this Society, is the idea I entertain of the vaſt importance of thoſe countries to which theſe hints allude, conſidered in a national light, if they ſhould ever be employed for the purpoſes that nature evidently intended them,

and

and the deference I pay to the ſuperior judgment of thoſe who have ſeen and approved of theſe propoſals.

No. IV.

Memorial concerning Britiſh Wool, proving its ſuperior value and fineneſs in former times, and the Natural Advantages of the Northern and Weſtern parts of Scotland for raiſing the Fineſt Wool, and Improving the Breeds of Sheep in other reſpects.

THE facts aſſumed in the two preceding papers are of too much conſequence to be admitted without proofs: But it would far exceed the bounds which the preſent memoir admits of, to adduce all the proofs of them that might eaſily be produced. It ſhall ſuffice, therefore, here to ſtate only a few of the many that might be found, from ſuch authorities as may be relied on.

The fineneſs of Britiſh wool was ſuch as to induce the Romans, while they were in poſſeſſion of this iſland, to eſtabliſh a cloth manufacture at Wincheſter, for the uſe of the *Emperors* *. This, therefore, muſt have been deemed the fineſt wool in the univerſe at that time; for it is well known, that the Romans were peculiarly attentive to ſheep, and held fine wool in the higheſt degree of eſtimation; and that then almoſt the whole civilized nations on the globe, were ſubjected to the power of the Roman Emperors. Before they became acquainted with Britain, the wool of *Turdetania*, a province of ancient Spain, was much eſteemed by them, but that, in time, gave place to the wool of the *Coraxi*, a people of Aſia. Strabo, ſpeaking of *Turdetania*, ſays, " *Frequens inde primum veſtis veniebat, nunc vero Coraxorum amplius lanificium excellentiſſimæ pulchritudinis, unde admiſſarii*

* Gibſon's Camden's Britannica, p. 118.

miſſarii arietes talento emantur." A talent was equal to L.216 Sterling; a high price for a fine-woolled ram. Strabo lived under the reign of Auguſtus, before the productions of Britain were well known to the Romans; and it appears from the fact above ſtated, that even the wool of the *Coraxi* was in its turn deemed inferior to that of this iſland, for it was here that the Roman Emperors, during their moſt luxurious æra, choſe to ſupply themſelves with their moſt ſumptuous robes.

In conformity with this idea, we find that *Dionyſius Alexandrinus*, in his treatiſe *de ſitu orbis*, as quoted by Hollingſhed, makes uſe of the following hyperbolical phraſe, ſtrongly expreſſive of the uncommon fineneſs of Britiſh wool, as well as the dexterity of Britiſh *ſpinſters*, according to the prevailing opinion of the time. "The wool of Britain (ſays he) is often ſpun ſo fine, that it is in a manner comparable to the ſpider's draught *." A phraſe, which, if not ſtrictly juſt at the time, ſeems to have been prophetic, as I at this time produce to the Society a ſpecimen of the ſingularly fine woollen yarn, ſpun by Miſs Ann Ives of Spalding, in Lincolnſhire, which, though ſtrong, is drawn to ſuch a fineneſs, that a pound weight of the yarn meaſures no leſs than 168,000 yards in length, which is equal to 95 miles †.— This young lady, who has ſo far outdone any thing of this ſort that has been known, hopes to be able to make it ſtill finer, had ſhe ſome of our Shetland wool. "I think (ſays ſhe) your Shetland wool the ſofteſt I ever felt, and make no doubt it would ſpin beautifully fine. If a ſmall quantity could be got, I ſhould like much to try it." The wool ſhall be ſent; and I hope to be able to ſhow the Society ſome of the yarn made of it ſtill nearer in fineneſs "to the ſpider's

* Hol. Chron. of Eng. p. 221.

† This is equal to eleven ſpindles, wanting one and one third cuts of the meaſure for yarn in the neighbourhood of Edinburgh. This yarn was ſpun from Engliſh wool produced by a mixed breed, reared by Sir Joſeph Banks, Bart. from the fineſt wool'd Lincolnſhire ewes, improved by a Spaniſh ram.

der's draught," than that I have now the honour to produce.

During the diſtractions that prevailed in Britain after the Romans left this country, the manufacture of cloth, like every other branch of induſtry introduced by that civilized people, fell into neglect: But a manufacture of ſuch general utility could not be entirely loſt. From probability only, we might therefore ſafely conclude that it was ſtill carried on to a certain degree. But notwithſtanding the general ignorance that prevailed for many ages, and the inattention of our writers to the progreſs of uſeful arts, we are ſtill able to gather from a few ſcattered hints that have been accidentally preſerved, that the manufacture of wool was at all times conſidered as a favourite employment by the people of England, and that the ſuperior fineneſs of that wool over all others was univerſally known and freely acknowledged; though our hiſtorians in general have, through inattention, diſregarded theſe facts, and given an erroneous account of the introduction and progreſs of the woollen manufacture in England. The very name by which unmarried women in England are deſigned, viz. *Spinſters*, is a proof at once of the antiquity and univerſality of this manufacture; for the practice muſt have been univerſal, when it was thought proper to deſign *all* women Spinſters; and the antiquity of this epithet is beyond the limits of any record, or even traditional account of its origin.

The mother of Alfred the Great is repreſented as being ſkilled in the ſpinning of wool herſelf, and buſied in training her daughters to the ſame employment. This ſeems indeed to have been the favourite employment of the great people of thoſe times; for Fabian, ſpeaking of Edward the Elder, who died *anno* 925, ſays, "He ſet his ſons to ſcole, and his daughters he ſet *to wol werke*, taking example of Charles the Conqueſtadour *."

It

* Fabian. Chron. ch. 179.

It has been commonly asserted, and generally believed, that the woollen manufacture was introduced into England by Edward III. but the fact is, that this manufacture had been always considered in this island, from the days of the Romans in it, as its chief and favourite manufacture. This was so much the case, that Gervase of Canterbury, who wrote about the year 1200, found this manufacture of such old standing in Britain, that no trace of its origin, nor tradition concerning its introduction there, could be obtained. "The *art of weaving* (says he) seemed to be a peculiar gift bestowed upon them (the people of Britain) by nature *."

Madox, in his history of the Exchequer, has also preserved many interesting facts, which clearly prove that the woollen manufacture was an old established business, carried on to a vast extent, even in separate departments, by numerous and powerful guild fraternities, long before the time our historians have said it was introduced into the country. From these notices the following striking facts are selected.

Anno 1140 (the 5th of King Stephen), he takes notice, that

"The *weavers* of Oxford pay a mark of gold for their gild."

"The *weavers* of London, for their gild, L.xvi."

"The *weavers* of Lincoln, two chasceurs, that they might have their rights."

"The *weavers* of Winchester, one mark of gold, to have their customs and liberties, and right to elect the alderman of their gild." And,

"The *fullers* of Winchester, L.vi for their gild †."

Thus it appears, that weaving was at this time an old and long-established business, carried on to a great extent by guild fraternities established in many and far distant parts of the country; and that even the subordinate department of *fulling* was not only carried on as a distinct employment by

* Gerv. Chron. col. 1349 † Madox Hist. Exch. p. 332.

by individuals, but had alſo attained to ſuch a magnitude, as to be erected into a ſeparate *guild*; and all this two hundred years at leaſt before the days of Edward III. the ſuppoſed introducer of the woollen manufacture into England.

That the art of *dying* was carried on by a *guildry*, I have not been able to learn, though it is highly probable; but that it was carried on as a ſeparate, honourable, and lucrative buſineſs, is clearly proved by the following fact that incidentally occurs in the ſame author.

"*Anno* 1201, David *the Dyer* pays one mark, that his manor of —— may be made a burgage *."

That ſome adequate notion may be obtained of the magnitude and importance of the woollen manufacture in thoſe days, when compared with others, I ſhall ſelect from the ſame author the following facts, by which the reader may compare the wealth and power of the *weavers* and the *bakers*.

"*Anno* 1150. The *weavers* of London ſtand charged with iii marks of gold for the farm of their gild for two years; the *bakers* of ditto, with one mark and vj ounces of gold."

"*Anno* 1164. The *weavers* of London rendered L.xij *per annum* for the farm of their gild; the *bakers* of ditto, L.vj *per annum* †."

In both theſe caſes, it is obſervable, that the gild of *weavers* pay preciſely twice as much as that of the *bakers*; which proves in a moſt convincing manner, that it muſt have been at that time a very great and flouriſhing manufacture, indeed the ſtaple of the country, as no other gild paid ſo much in thoſe days.

Other notices prove that the woollen manufacture was then carried on to a very great extent, and that the ſale of cloth had even been a great buſineſs, and of old ſtanding, at this early period. Thus,

"*Anno* 1140. The *men* of Worceſter pay C ſhillings, that

* Mad. Hiſt. Exch. p. 278. † Ib. p. 232.

that they may buy and ſell dyed cloth, *as they were wont to do in the time of King Henry the Firſt* *. We ſhall by and by have occaſion to ſhew that this muſt have been Britiſh made, and not foreign cloth; ſo that the manufacture was not only of old ſtanding, but extremely extenſive in the days of Henry I. Other notices to the ſame purport occur.

"*Anno* 1225. The *weavers* of Oxford pay a caſk of wine, that they may have the ſame privileges that they enjoyed in the days of King Richard and King John †."

The extent of the woollen manufacture in England, at the period of which we now treat, may be gathered from other circumſtances. The buſineſs of dying, as has been already obſerved, was then a diſtinct and honourable employment; and though we ſhall have occaſion to ſhow that cloth was then dyed of many colours, yet blue muſt have been one of the chief colours, and *woad*, as being the only blue dye in thoſe days, in great requeſt. So great was the demand for this article, that, though Britain was at all times noted for its culture, it became neceſſary to import woad from foreign parts; and we find the following ſums accounted for by ſundries, as the *cuſtoms* paid for woad imported in the year 1293. That the reader may be able, without trouble, to form an idea of the value of theſe ſums in thoſe days, two additional columns are made; the firſt denotes the preſent value of the ſilver actually contained in the reſpective ſums, if eſtimated at the ſame price *per* ounce it would ſell for at preſent; and the other the comparative value of the ſame ſum at the time, according to the eſtimate of Mr Hume and others.

* Mad. Hiſt. Exch. p. 286. † Ib. p. 286.

CUSTOMS *paid for woad imported into England, anno* 1213, *viz.*

				Silver at the present standard.			*Estimated value at the time about*		
" In Kent & Suffex, Dover excepted,	L.103	13	4 =	L.321	10	6 =	L.3200	0	0
" Yorkfhire,	98	13	4 =	306	10	0 =	3090	0	0
" London,	17	13	4 =	54	18	9 =	540	0	0
" Norfolk and Suffolk,	53	6	0 =	165	4	7 =	1650	0	0
" Southampton,	72	1	10 =	223	9	8 =	2230	0	0
" Effex,	4	2	4 =	12	3	4 =	121	0	0*
	L.349	9	2	L.1083	16	10	L.10831	0	0

This account ferves not only to prove that the woollen manufacture was then carried on to a great extent, but it alfo gives fome notion of the places where it was eftablifhed. From this, and fome of the former notices, it appears that this manufacture ftill kept its ground at *Winchefter*, where the Romans eftablifhed it, as Southampton, the port of Winchefter, ftands very high in the above lift.

Sir Mathew Hale remarks, that, " in the time of Hen- " ry II. and Richard, this kingdom greatly flourifhed in " the manufacture of cloth; but, by the troublefome wars " in the time of King John and Henry III. and alfo of Ed- " ward I. and Edward II. this manufacture was *wholly loft*, " and all our trade ran in wools and wool fells, and " leather †." That the woollen manufacture *greatly declined* in thofe troublefome times is not to be doubted; but that it was *wholly loft* is fully proved to be a miftake, even from the facts already fpecified, of which we fhall foon find farther proofs. The account juft now ftated, of the importation of woad, it deferves to be remarked, was for the 14th year of King John.

It was judged to be not improper thus to prove that the woollen manufacture was eftablifhed in Britain even before the Flemings are known to have poffeffed it at all; nor is it improbable that they might even receive the firft rudiments of the art from hence, along with the wool that was neceffary

* Hift. Exch. p. † Hale's prim. orig. of Mankind, p. 161.

neceſſary for its ſupport: There is reaſon at leaſt to believe, that, during the troubleſome times taken notice of by Sir Mathew Hale, many of our manufacturers took refuge in the Low Countries, and improved the woollen manufacture of that country. Be that, however, as it may, it is more our buſineſs in this place to take notice, that Britiſh cloth was in thoſe days made of Britiſh wool alone, and that this ſold at ſuch a high price as to give encouragement to the importation of the cheaper wool of Spain into Britain, which was of ſuch an inferior quality as made it neceſſary to prohibit the uſe of it, leſt it ſhould have debaſed our manufactures. Thus,

" *Anno* 1172, King Henry II. expreſsly ordained by ſtatute, that Spaniſh wool ſhould not be mixed with Engliſh wool in the making of cloth.*"

And that the cloths ſo made of Engliſh wool were broad cloths, and that theſe cloths were of a fine quality for foreign markets; and that, at this period, the Engliſh manufacturers poſſeſſed the knowledge of ſeveral particulars in that art that were afterwards loſt, and carried on ſuch an export of various kinds of cloth, as to become a conſiderable object of revenue, will appear from the following facts.

Anno 1212, in the *Magna Charta* of King Henry III. it is particularly provided, as follows, viz.

" That there be one breadth of *dyed* cloths, ruſſets, and " haberjets, *i. e. two yards* within the liſts ‡."

And, in the year 1284, Edward I. impoſes the following duties on woollen goods exported, viz.

" For cloth dyed *ſcarlet in grain* †, two ſhillings a cloth."

" *Item*,

* Anderſon's Hiſtory of Commerce, p. 189. ‡ Ib. *anno* 1212.

† By *ſcarlet in grain* we are here certainly to underſtand that fine crimſon made from kermes, called afterwards crimſon ingrained, becauſe of its permanency of colour. Scarlet, properly ſo called, made from cochineal, was not known for many ages afterwards. It was probably the ſame colour that is called *brewne* in the 47th act, parliament 2d of James II. of Scotland.

" *Item*, 1s. 6d. for every cloth in which a *grain colour* " *is intermixed.*

" *Item*, 12d. for every cloth without grain *."

The art of dying *grained colours* ſeems to have been then well known, though, in the days of Elizabeth, our manufacturers appear to have been ignorant of that branch of the buſineſs.

From the days of Edward I. to thoſe of Charles I. the *woollen manufacture*, and the exportation of Engliſh *cloth* and *wool*, were the principal objects of legiſlation, in as far as it reſpects commercial objects. During all this period, Britiſh cloth, made entirely of home materials, was ſought for with great avidity by all nations; and Engliſh wool, in particular, was ſo much coveted abroad, as to be the object of innumerable treaties with foreign Princes. The commercial hiſtory of this period exhibits, indeed, little elſe than an uninterrupted ſeries of petitions from various deſcriptions of men for obtaining it, and of treaties and ſpecial grants from the Crown for that purpoſe. To enumerate theſe in detail would be too long for this eſſay—But it is almoſt impoſſible to look into Anderſon's Hiſtory of Commerce, or to turn up a page of Rymer's Fœdera, without meeting with them. To theſe authors, therefore, I beg leave here to refer. I ſhall only at preſent obſerve, that among theſe petitioners are to be found merchants, prieſts, cardinals, popes, and kings, too numerous to be particularly named. One of theſe petitions only, from the ſingularity of circumſtances reſpecting it, I ſhall mention. It is from Don Duartè King of Portugal, and brother-in-law to the King of Caſtile, with whom he lived in the ſtricteſt friendſhip and brotherly love. Yet this King of Portugal found it neceſſary to apply " to King Henry VI. of England in " the year 1437, for liberty to export *ſixty ſacks of Cotſwold* " *wool*, by means of which he was to procure certain cloths of

* Hiſt. of Com. *anno* 1284.

of gold from Florence for his own uſe *." Such was the eſtimation in which Engliſh wool was held in Italy at this time, as to be preferred to any commodity, even to gold itſelf, and ſo great the demand for it, as to require the intervention of crowned heads to obtain it for the merchants. Neither ought it to paſs unobſerved, that it was *Engliſh*, and not *Spaniſh* wool theſe merchants coveted, which the ſame King could probably have obtained of his brother-in-law with little trouble.

During the long period above ſpecified, I have not been able to meet with a ſingle fact that tends to ſhow that *Spaniſh* wool was, in any caſe, reckoned equally fine with Engliſh wool. *Lewis Guicciardin*, a native of Italy, who wrote the hiſtory of the Low Countries about the year 1470, when the Flemiſh States were in their higheſt glory, takes notice, on ſeveral occaſions, of the great ſupplies of wool which theſe States obtained from *Spain*, as well as *England*. And though he no where, that I can find, draws an expreſs compariſon between them, yet, on every occaſion where he mentions them incidentally together, he gives the *firſt* place to that of England, as deſerving to be preferred to the other. In one caſe, he calls Engliſh wool "*lane finiſſime*," and Spaniſh wool he calls "*lane boniſſime* †, by which it would ſeem that *fineneſs* was the diſtinguiſhing peculiarity of Engliſh wool at that time, when compared with that of Spain. In another place, however, he incidentally draws a ſort of parallel between them, in which the ſuperiority of Engliſh wool is ſtill more clearly expreſſed. His words are: "Le "lane del paeſe ſono groſſete, et non ha che fare di bonta "con quella di Spagna, et *maneo con quelle d'Inghilterra* §." That is, the wool of the country is coarſe, and cannot be compared with that of Spain, *and far leſs with that* of England. Here the ſuperior fineneſs of Engliſh wool is very diſtinctly

* Hiſt. of Com. vol. I. p. 263.

† Guicc. deſcr. de Paeſe baſſi. Annverſa 1577, p. 122. § Ib. p. 10

diſtinctly marked, though the preciſe difference in this reſpect is not aſcertained.

This deficiency in Guicciardin and other hiſtorians may be in ſome meaſure ſupplied by the following fact that incidentally fell in my way. In the year 1470 a Spaniſh veſſel bound for the Netherlands, having been taken by an Engliſh privateer, the owners of that veſſel lodged a claim of damages, and in the account preſented for that purpoſe, the wool is ſtated as being worth, *in the Netherlands*, L.4 per ſack, weighing one quintal Spaniſh *, which is equal to L.9, 12s. per ſack Engliſh of 364 pounds. About that time the beſt Engliſh wool, as may be gathered from Smith's Memoirs of Wool, (vol. I. *paſſim*), ſold in Flanders for not leſs than L.18 or L.20 per ſack. Rapin, in one caſe, expreſsly mentions that Engliſh wool, *anno* 1337, ſold in Flanders at the exorbitant rate of L.40 per ſack; ten thouſand ſacks having brought in Brabant no leſs than four hundred thouſand pounds †. This ſuperiority in price neceſſarily ſuppoſes a great ſuperiority in the quality of Engliſh wool at that time.

This ſuperiority in the quality of Engliſh wool over all others then generally known in the commercial world, continued down to the days of Elizabeth. In the days of that great Princeſs, attempts were made to recover ſome of the branches of the woollen manufacture that ſeem to have been loſt during the troubles occaſioned by the conteſts between the York and Lancaſtrian parties for the crown, particularly reſpecting the art of dying, and perhaps dreſſing cloth.—For, though the exports of cloth from England in the days of Elizabeth were very great, amounting on an average of years to about two millions Sterling ‡, yet a great part of theſe cloths were exported without having been dyed, which gave

* Hiſt. of Com. anno 1470. † Rapin's Acta Regia, p. 151.

‡ Smith's Mem. of Wool, cap. xx.—xxvi.

gave room for complaints, and occaſioned inconveniencies that we muſt not take time here to ſpecify.

To remedy theſe evils, a project was ſet on foot in the year 1579, to ſend out one *Mr Morgan Hubblethorne*, dyer, into Perſia, with a view to perfect himſelf in ſome particular branches of the art of dying, which were wanted; and *Mr Richard Hackluytt*, of Oxford, a man of great knowledge in thoſe days, having been appointed to draw up a ſet of inſtructions for that occaſion, thus expreſſes himſelf reſpecting Engliſh wool, in the preface to theſe inſtructions.

" For that England hath the beſt *wool* and cloth in the " world *," &c.

And in another ſet of inſtructions for a principal Engliſh factor at Conſtantinople, are the following remarkable particulars on this head.

" Firſt, You cannot denie that this realme yeeldeth *the* " *moſt fine* wooll, the moſt *ſoft*, the moſt ſtrong wooll, the " moſt durable cloth, and moſt apt of nature of all other " to receive die; and no iſland, or any other kingdome ſo " ſmall, doeth yeeld ſo great abundance of the ſame, &c.

" Spaine now aboundeth with woolls, and the ſame are " clothed (i. e. draped, or made into cloth). Turkie hath " woolls, and ſo have divers provinces of Chriſtendome and " Heatheneſſe, and cloth is made of them in divers places.

" 1ſt, But if England have the moſt fine and the moſt " excellent woolls of the world in all reſpects (as it can- " not be denied but it hath); 2d, If there may bee added " to the ſame excellent artificiall, and true making, and ex- " cellent dying; 3d, Then no doubt but we ſhall have " vent for our clothes, although the world did abound " much more with woolls than it doeth †," &c.

Mr Arthur Edwards, agent for the Ruſſian Company *anno* 1568, gives the following particulars reſpecting the trade

* Hackluytt's Collections, vol. II. p. 161. † Ib. p. 163.

trade to Venice in wool and woollen ſtuffs from England at that time, viz. " That the Venetian merchants in London " ſent to Venice, and thence to Turkie by Haleppo, and " Tripoli in Syria, and thence into Perſia, great abundance " of fine kerſies, of broad cloths of all ſorts and colours, " as ſcarlets, violets, and other of the *fineſt cloths of all the* " *world.* Alſo that the Venetians brought out of Eng- " land, not only ſuch cloths ready made, but furthermore, " great plenty of *fine wooll* to mingle with their woolls, of " which they could not otherwiſe make fine cloths; affirm- " ing, that there went out of England that waies above " two hundred thouſand kerſies, and as many broad cloths, " beſides *fine wooll* and other merchandize; beſide alſo " great abundance of the like cloths, the which were car- " ried into *Spaine*, Barbarie, and divers other countries *."

The following paſſages from a poem, whoſe verſification appears to us not a little uncouth on account of the language in which it is written, being now obſelete, that ſeems to have been compoſed during the indolent reign of Henry VI. concur with the foregoing and every other account preſerved concerning theſe ancient times, in repreſenting Engliſh wool as indiſputably the beſt in the known world at that time.

——————" For the woolle of England
" Suſteineth the common Fleemings I underſtand;
" Then if England would her woolle reſtraine
" From Flanders, this followeth in certaine,
" Flanders of nede (*a*) muſt with us have peace,
" Or els (*b*) ſhee is deſtroyed without lees (*c*).
" Alſo if Flanders thus deſtroyed bee,
" Some merchandy of Spaine will never ythee (*d*);
" For deſtroyed it is, and as in cheefe,
" The woolle of Spaine it cometh not to preeſe (*e*),

But

* Hack, vol. I. p. 392.

(*a*) Need. (*b*) Elſe. (*c*) Releaſe, recovery. (*d*) Find vent.
(*e*) Does not ſtand the teſt, or proof.

" But if it be coſted and menged (*a*) well
" Amongſt the Engliſh woolle the greater delle (*b*).
" For Spaniſh woolle in Flaunders draped is,
" And ever hath bee (*c*) that men have minde of this;
" And yet woolle is one of the cheefe merchandy (*d*)
" That longetts to Spaine: who ſo will eſpie,
" It is of little value, truſt unto mee,
" With Engliſh woolle but if it menged (*e*) bee."
* * * * * * * * * * * * *
" *Our goodly woolle*, which is ſo generall,
" Needful to them of Spaine, and Scotland als (*f*),
" And other coſtes (*g*) this ſentenſe is not fals (*h*). *

On theſe two laſt quotations I ſhall beg leave to make a few remarks, as the ſubject is of very great importance, and either has not been adverted to, or wilfully miſrepreſented in all the publications I have ſeen on this ſubject.

1. I preſume theſe authorities put it beyond a doubt, that at and before the year 1579, Engliſh wool was ſuperior in quality to Spaniſh wool, and ſold in a fair market at a higher price.

2. That England then manufactured cloth of the fineſt quality that was to be found in any part of the world, and as ſuch it was coveted by the moſt luxurious nations in the ſouth of Europe, and in Aſia and Africa.

3. That theſe fine cloths were made *entirely* of Engliſh wool, without the ſmalleſt admixture of Spaniſh wool at all. Mr Hackluytt's words on that head are clear and expreſs, ſo as to admit of no doubt, and they are at the ſame time ſo announced as to ſhow that he had not at that time an idea that ever the people in England would think of employing

(*a*) Mixed. (*b*) The greater deal, part. (*c*) Been. (*d*) Merchandize. (*e*) Mixed be. (*f*) Scotland alſo. (*g*) Other coaſts, countries. (*h*) Is not falſe.

* Hackluytt's Collect. vol. I. p. 188.

Spaniſh wool in the fabrication of their fine cloths, far leſs that they had already done ſo. From the buſineſs in which he was employed he muſt alſo have been particularly well informed of things of this nature, by the manufacturers on whoſe account he was engaged; ſo that his authority alone is worth a thouſand vague aſſertions.

4. That Engliſh *wool* was coveted abroad as a commodity of great value, to be mixed with other wool for perfecting their fineſt manufactures. On this laſt head, I beg leave to remark, that this fact, which was real and undoubted, *at that time*, has been aſſerted thouſands of times ſince then, after circumſtances were ſadly changed; and theſe aſſertions have been greedily believed without proof or examination, as this opinion flatters the national vanity; and it has been employed for very deſtructive purpoſes.

5. That the wool ſo much coveted then, was ſhort clothing wool, and not long combing wool, which is the only kind now coveted abroad. That it was clothing wool, appears evident from two circumſtances, viz. 1. The places where it was chiefly coveted, viz. Florence, Genoa, and Venice; as it is well known that the fine woollen manufactures of theſe places were *cloths*, and not *ſtuffs*, in which combed wool could be uſeful; and, 2d, From the kind of Engliſh wool uſually ſpecified in the petitions, viz. *Cotſwold* wool, which was always of the ſhort carding ſort.

Let us now contraſt theſe well authenticated facts, with the following facts, that are equally undeniable, with regard to the preſent ſituation of the wool and woollen manufacture of England—and then draw ſome neceſſary inferences.

1. Engliſh clothing wool is now much inferior in quality to that of Spain, and ſells at a price greatly below it in every free market where they can be brought together.

2. That England ſtill manufactures fine cloths of a very good quality; but that fine cloths are made in France and other countries, which are generally preferred to them in the markets

markets in the Levant, and many other ſouthern countries, to which we can now export few or no *cloths* at all.

3. That *not one ounce of Engliſh wool* can be employed in the fabrication of our *fineſt cloths*, either for our own wear, or for foreign ſale.

4. That though it be ſtill often aſſerted in the moſt bare-faced manner, in contradiction to theſe undeniable facts, and in defiance of common ſenſe, that Engliſh clothing wool is coveted abroad, for the purpoſe of perfecting their cloths, and that other nations, particularly the French, never can make fine cloths without the aid of Engliſh wool to mix in their manufactures, yet ſuch aſſertions are falſe, groundleſs, and abſurd. Can any thing be more ridiculous, than to hear perſons ſeriouſly maintain that Engliſh wool is neceſſary in France for perfecting a manufacture, in which the people of England dare not venture to employ an ounce of that wool without debaſing it? or that the French cannot make *fine* cloth for want of *materials*, when they have eaſier acceſs than ourſelves to buy the very ſame materials of which we ourſelves are compelled to make our beſt cloths? They have even finer wool of their own growth, fit for that purpoſe, than could be had in England.

5. It is a certain fact, that the only kind of wool in England, which can now lay claim to any kind of ſuperiority over that of other nations, is not the ſhort carding wool which was of old ſo highly prized, and ſo much ſought after by foreign nations, but a kind of wool of a longer ſtaple, fit for being combed, and which can be only employed, not in the manufacture of cloth, but of other lighter fabrics of various denominations.

From theſe facts thus accurately compared, we are led to ſee that the following inferences are undeniable.

1. Since it is clear that Britain did actually poſſeſs very fine clothing wool in great abundance in and before the reign of Elizabeth, which evidently does not now exiſt in the

the iſland, its diſappearance muſt be owing to ſome cauſe, either *phyſical*, or *moral*; and it imports the nation much to know what has been the real cauſe of a phenomenon of ſuch great national importance. And,

2. Though it be certain that we now do poſſeſs combing wool of a very good quality; yet, as we have already loſt the fine carding wool, which was of a quality ſtill more ſupereminently excellent than our combing wool can boaſt, there is great reaſon to fear, that, unleſs we diſcover the cauſe of the deterioration of our clothing wool, and obviate it, that through the operation of the ſame malign influence, if not guarded againſt, we may gradually ſuffer the combing wool to be debaſed, till *it* alſo ſhall become inferior to that of ſome of our neighbours.

That this change has proceeded from *natural* cauſes, no perſon can ſuppoſe. The climate and the paſtures are ſo little altered ſince that time, as to be altogether inadequate to the producing this effect. Indeed the probability is, that, were it not for other cauſes, the changes produced in reſpect of paſture muſt have been favourable to the growth of wool, inſtead of the reverſe.

This change muſt therefore have been effected by *moral* cauſes; and among theſe, no one, unleſs it be ſome radical change in the laws, ſeems to be capable of producing an effect that would have been ſufficient to controul the commercial ſpirit, whoſe influence on human affairs is unbounded and indefinite.

In reviſing the ſyſtem of legiſlation that has prevailed in Britain reſpecting this article, before and after the period here in queſtion, we do accordingly find that a ſyſtem of legiſlation, reſpecting the commerce of wool, was adopted ſoon after the days of James I. extremely different from that which had been followed before that time in this country, which gives reaſon to fear the deplorable change that has

has taken place, in this reſpect, may have been owing to that cauſe.

Before the days of Charles II. the exportation of wool from Britain, though ſubject at all times to a high duty, and liable to temporary interruptions on monopolizing principles, was ſtill however permitted, in one way or other. Since that time, it has been totally prohibited, under the ſevereſt penalties. This matter has been much miſrepreſented, as might be eaſily proved, were it here proper.

On examining what ought naturally to be the effect of ſuch a prohibition, in a country that had been accuſtomed to carry on a conſiderable foreign trade in wool, it is evident that the *firſt* effect of it muſt have been greatly to lower the price of *fine* wool.

Before the prohibition took place, the difference between the price of fine and of coarſe wool muſt have been very great; becauſe, as the duty on the exportation of wool was the ſame in all caſes, it was only that which was *very fine*, and which of courſe bore a very high price in foreign markets, that could find its way thither. The coarſe wool, which ſold at a price in foreign markets not much higher than the duty (which was ſometimes L.5 per ſack), together with freight and charges, could never go thither; great exertions, therefore, would be then made by the wool growers to obtain *fine* wool fit for the foreign market. No ſooner, however, was this outlet ſtopped up than the immenſe glut of *that kind* of wool in the home market would lower the price of that fine wool, ſo very much as to make it no longer worth the wool growers while to rear it *.—Regardleſs, therefore, of the quality of his wool any longer, his attention muſt now be turned chiefly towards the improving

* For a particular enumeration of the evils that actually were experienced from this cauſe, ſee a treatiſe of Roger Coke, entitled, The equal Danger of Church, Trade, and State of England, 4*to*, printed *anno* 1600—and Smith's Memoirs of Wool, *paſſim*, and other pamphlets there referred to.

proving the carcaſe of his ſheep; and therefore a breed of coarſe wool'd ſheep might become more profitable to him than the fine wool'd ſort, which uſed to return the beſt profit. Theſe coarſe wool'd ſheep muſt of courſe be univerſally preferred—and, in theſe circumſtances, nothing can be more natural than the change we have had occaſion to remark—nor, if the ſame ſyſtem of legiſlation be perſiſted in, will it be in the leaſt ſurpriſing if the fine combing wool, that now furniſhes the ſubject of ſo many vain panegyrics, ſhould in its turn diſappear. I think there are evident ſymptoms of its degenerating.

The *manufacturers* have been accuſed of obtaining this law, with a view to their own emolument; but, if it be ſo, it will be eaſy to ſhow that the effects have been very different, in regard to their buſineſs, from what they have hoped it would be. At the *firſt*, there was no doubt ſome ſlight advantage derived from it by individuals among them; but the conſequences of it to that manufacture now are highly prejudicial.

In former times, and as long as the exportation of Britiſh wool, under a duty, was permitted, it muſt either have been of a quality, equal at leaſt to that of Spain, to bring the ſame price in a free market abroad, or finer, if it brought a higher price than the Spaniſh wool abroad, though it muſt have ſold at a lower price at home. Say then that the duty, freight, commiſſion, and expences was L.5 per ſack; this wool muſt either be ſold in a foreign market, at the ſame price with Spaniſh wool of the ſame quality, or it could not be ſold at all.—Admitting then it was equally fine with the Spaniſh wool, it will follow that the Engliſh manufacturer might buy it at leaſt L.5 per ſack cheaper than either it or Spaniſh wool of the ſame quality could have been bought for by foreign manufacturers.—If therefore rival manufacturers found it neceſſary to buy this wool, they muſt pay for it at leaſt L.5 per ſack more than the

Britiſh

Britiſh manufacturer could have had it for at his door—and this premium ought to have operated greatly in enabling him to underſell them in foreign markets. Such would have ſtill been the condition of the Engliſh cloathier, had the exportation of wool continued to be permitted as in the days of Elizabeth. What is it now? At preſent no *Britiſh* wool fit for making *ſuperfine* cloth is to be found. If he muſt make *fine* cloths, therefore, for foreign markets, he muſt buy Spaniſh wool at the ſame price at leaſt with his rival competitors, and thus he is entirely deprived of the whole of the premium he would have had, if Britiſh wool had continued to be exported as formerly. Thus is the nation at large deprived of a beneficial branch of commerce it might eaſily have enjoyed, and the King of Britain has loſt a conſiderable revenue, which would have had this ſingular advantage over moſt ſources of revenue, that it would have operated at the ſame time as a bounty to the farmer *, and as a premium to the manufacturer, to enable him to extend his foreign conſumption of Britiſh manufactures far beyond what ever can take place under the miſerable ſyſtem of policy that has prevailed for ſome time, which has been adopted through ignorance, and can be continued only through imbecillity of mind.

This digreſſion has led me much farther than was expected—but it is hoped the importance of the ſubject diſcuſſed, and its intimate connection with the object of the preſent enquiry, will be a ſufficient excuſe.

The ſame legiſlative regulations that baniſhed fine wool from England, have operated in a ſimilar manner in Scotland—And though it be true that the woollen manufacture in Scotland never had riſen to the ſame perfection as in England—and though we have had no *Madox* nor *Rymer* to collect together the ſcattered facts that ſerve to indicate the

* This muſt only be conſidered as a bounty to the farmer *relatively*, when compared with the preſent ſyſtem of legiſlation—not *abſolutely*.

the progreſs of the arts here, yet there are ſtill to be found a few, though indeed a very few hints, that ſufficiently ſerve to ſhow that there were woollen manufactures here of ſome note, and that wool was to be found in that country alſo of a very ſuperior degree of fineneſs.

Guicciardin, in his hiſtory of the Low Countries, takes notice ſeveral times of the wool of Scotland as an article of trade to that country. And,

As early as the year 1393, Thomas Dunbar, Earl of Moray, granted to the town of Elgin "the liberty of exporting "all the *wool*, *cloth*, and other things that go by ſhip out of "his harbour of Spey, duty free" *. Thus, it appears that *wool* and *cloth* muſt have then been deemed the moſt principal exports from thence, as they alone have been thought worthy of being mentioned by name. But when ſubjects had thus a right of exacting national duties, it is not to be expected that any diſtinct account can be now obtained, either of their nature or their amount. It is alſo ordained, by the 40th act of the third Parliament of James I. of Scotland, *anno* 1425, "That of ilk pound's worth of woollen "claith had out of the realme, the King ſall have of the "out-haver for cuſtome twa ſhillings." Cloth was therefore an article of export from Scotland in thoſe days.—How different at preſent? Cloth and ſalmon are the only articles of export mentioned in that law.

Hector Boethius, who wrote about the year 1460, takes notice of the fineneſs of the wool produced in various parts of Scotland; but, in general, he mentions not any criterion by which that fineneſs can be aſcertained—only, in ſpeaking of the ſheep in the vale of Eſk, in the ſhire of Angus, he uſes the following words, as tranſlated by Hollingſhed: "Whoſe ſheep have ſuch white, fine, and ex-"cellent wool, *as the like of it is hardly to be found again* "*within the whole iſland* *." Here it is parallelled with that of

* Hiſt. of Moray, p. 193. † Hollingſhed's Chron. p. 14[illegible]

of England, which was without doubt at that time the fineſt in Europe.

Sebaſtian Munſter, in his *Coſmographiæ Univerſalis*, printed in the year 1550 at Baſil, has the following ſhort notice concerning the ſubject of our preſent inquiries :— "Paſcua in utroque regno (*ſcil.* Scotia et Anglia—he is " treating of Scotland at the time) ſunt optima, unde et " *nullibi melior et tenerior lana* *." This once more puts the Scotch and Engliſh wool in the ſame claſs, and in the firſt rank for fineneſs.

Petruccio Ubaldini, who wrote a deſcription of Scotland in the Italian language, imprinted at Anverſa 1588, mentions the wool of this country in terms of greater approbation, and takes notice of ſome other peculiarities of our manufacture, owing to the fineneſs of the wool. His words are,—

" Ma che diremo noi della lana (it is of Scotland he " is ſpeaking), la quale apreſſo di tutte le genti é in pregio " grandiſſimo ?" *i.e.* " But what ſhall I ſay of the wool, which bears a very high price among all nations ?" And immediately he adds : " Ma quello che non bene é notó " ad ogniuno, non piccola parte di quella delicata et " gentile, della quale ſi fanno i panni ſcarlatti, et di co- " lor di porpora, et di altri colori finiſſimi di conteſtura " eccellentiſſime, et calze, et camicevole, et guanti, " commodita et ornamento d'illuſtri, et gran madonne, " non era da tacere †." " But what is not well known to every one, and what ought not to be concealed, there is no ſmall quantity of that fine delicate ſort, of which is made ſcarlet cloths of an excellent quality, and purple, and other fine colours, and ſtockings, and waiſtcoats, and gloves,

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* Coſm. Univ. p. 49.

† Deſcr. del reguo de Scotia de Petruccio Ubaldini Cittadin Fiorentin, p. 58.

gloves, convenient and ornamental, for diſtinguiſhed perſons, and ladies of high rank." Signior Ubaldini, during his reſidence in Antwerp, probably had an opportunity of ſeeing ſome of theſe kinds of goods brought to market; and the deſcription applies ſo well to that kind of delicate wool ſtill found in ſome parts of Shetland, as gives reaſon to believe he had been very well informed as to theſe particulars.

Theſe fine-woolled ſheep, however, though they certainly did exiſt in Scotland at the time Ubaldini wrote his book, and long afterwards, have now, like the fine-woolled ſheep in England, diſappeared on the main land, though they poſſibly may be recovered from ſome remote and neglected corner among the diſtant iſles. But when they ſhall be found, it will be difficult to increaſe the breed: For though, in conſequence of the prohibition to export wool from Britain, fine wool has become here ſo ſcarce, as to oblige us to have recourſe to Spain for a ſupply, and by conſequence has raiſed the price of fine wool here much higher than it would have been, and thus it may be thought holds out a ſtrong temptation to the wool grower in Britain, to try to rear fine wool once more; yet ſo long as the market continues limited, as it muſt be while the preſent laws ſubſiſt, and the reſtraints theſe laws produce continue to hamper the wool grower, no vigorous effort to regain that loſt object of commerce, can be expected to be made; and if it were made, there are difficulties occur in this attempt, which, unleſs in particular circumſtances, muſt for ever render ſuch attempts abortive. Fortunately for Britain, ſome parts of Scotland poſſeſs ſuch peculiar advantages in this reſpect, as no other rival nation can boaſt of: ſo that there, *and there only*, an effort to improve the breed of fine-woolled ſheep can be attended with a reaſonable proſpect of ſucceſs.

Experiments

Experiments have clearly proved, that the *permanent* qualities of any breed of ſheep can only be affected by a change in the parent ſtock *; and that of courſe, if a new breed be introduced into any country, it will infallibly be ſoon debaſed by intermixing with the native breed of the country, unleſs an entire ſecluſion of them ſhall be made at the rutting ſeaſon. At the rutting ſeaſon, however, it is well known, that no fences a farmer can rear are ſufficient to keep them ſeparate. They therefore intermix and degenerate, in ſpite of every effort that can be made to prevent it. Though it be not therefore a *phyſical* impoſſibility, to keep a few ſheep of a particular breed, for any length of time, *entirely* free from degenerating, in a country where other ſheep abound, yet it has been ever found to be *morally* impracticable †. Nature, however, has provided a ſet of fences perfectly capable of anſwering this purpoſe, at *no expence to the owner*, along the coaſts of Scotland, by having ſcattered there innumerable iſlands of various ſizes, on which any particular breed of ſheep may be kept, without trouble or expence, *entirely* ſecluded from all others, if it be required; ſo that if ever ſo few of the parent ſtock were originally obtained, they can be there kept till they ſhall increaſe to any number wanted, without a poſſibility of being debaſed in the

* Obſervations on the means of exciting a ſpirit of national induſtry, Let. vii.

† The patriotic efforts of Mr. D'Aubenton in France, ſhew the utmoſt that man can do in this reſpect; and his ſucceſs in improving the wool of France has been what might be expected, under the management of a perſon inſpired with ſuch an ardent zeal for promoting national improvements, as that gentleman poſſeſſes: But were his guardian arm withdrawn, and an attempt made to ſpread the improvements in general among the ſheep owners of that country, it requires no ſpirit of prophecy to foretel the event. The ſame may be ſaid of Mr. Le Blanc's experiments, mentioned App. No. I.

ſmalleſt degree. Here then, accurate experiments could be made, to aſcertain the value of any particular breed of ſheep that might be ſuſpected to poſſeſs particular excellencies, ſo as to enable thoſe who are concerned, to ſpeak with *certainty* of the particular value of each, and the circumſtances in which one kind could be kept with greater profit than another; a kind of knowledge which cannot ſo well be attained in any other ſituation.

Theſe iſlands are alſo peculiarly well adapted for the rearing of fine-woolled ſheep, on account of the climate they enjoy. There, little variation of heat and cold is experienced at different ſeaſons of the year, in compariſon of continental countries; and ſince it has been proved by repeated experiments, that the thickneſs of every part of each filament of wool is in proportion to the heat the animal was ſubjected to at the time that part of the filament was protruded from the ſkin *, it follows, that if the heat of ſummer where the ſheep paſtures be great, that part of the wool which grows at that ſeaſon muſt be very coarſe; and if the cold of the winter where the ſame ſheep lives be intenſe, that part of the wool which grows during that ſeaſon will indeed be very fine; but as it conſtitutes one part of the ſame filament with the coarſe wool that grew in ſummer, it will be impoſſible ever to ſeparate the fine from the coarſe by ſorting; ſo that very fine wool, upon the whole, cannot there be obtained.

On the weſtern iſlands of Scotland, however, as the ſummers are always cool, the wool that grows during that ſeaſon from the ſame breed of ſheep is much finer than if it had been kept in a warmer climate; and as the cold during winter is alſo extremely moderate, all the parts of each filament of wool are more nearly of the ſame quality, in reſpect to fineneſs, than in almoſt any other

* See Obſervations on the means of exciting a ſpirit of national induſtry, Letter vi. and poſtſcript to ditto.

[EDINBURGH, AUGUST 1790.]

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FRS. FSA. S.

*Honorary Member of the Society of Arts, Agriculture, &c. at Bath; of the Philoſophical, and of the Agricultural Societies in Manchester; and of the Academy of Arts, Sciences and Belles Lettres, Dijon; Author of ſeveral Performances *.*

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TO THE PUBLIC.

THE editor of this work has frequently had occaſion to remark, in the courſe of reading, that numerous facts, and important obſervations, have been publiſhed many years, without having ever come to the knowledge of thoſe claſſes of men who are engaged in the active purſuits of buſineſs, though it is, for the moſt part, by ſuch men only, that practical improvements can be applied to uſeful purpoſes in life. From this cauſe it happens, that the diſcoveries made by literary men, too often ſerve rather to amuſe the ſpeculative than to awaken the ingenuity of men of buſineſs, or to ſtimulate the induſtry of the operative part of the community, who have no opportunity of ever hearing of the numerous volumes in which theſe ſcattered facts are recorded.

He has likewiſe obſerved, that among thoſe who are engaged in arts, agriculture, manufactures, and commerce, there are many individuals of great ingenuity and conſpicuous talents, who, from experience and obſervation, have made important diſcoveries in their reſpective employments; but that theſe men being at preſent in a great meaſure excluded from the circle of literary intelligence, have neither an opportunity, nor any inducement to communicate their diſcoveries to others. Thus is uſeful knowledge confined to a few individuals only, at whoſe death it is irrecoverably loſt, inſtead of being univerſally diffuſed, as it of right ought to be, among all men, at leaſt of their own profeſſion; and the progreſs of the nation towards perfection in uſeful attainments is much retarded.

He has alſo often remarked, with extreme regret, that clergymen*, and others in remote parts of the country, whoſe minds in their early youth have been delighted with the charms of ſcientific purſuits, muſt in the preſent ſtate of things, unleſs they be poſſeſſed of affluence, reluctantly forego the pleaſures that reſult from a familiar intercourſe with the republic of letters, and ſuffer themſelves to ſink into a ſort of mental annihilation. To ſuch men the poet may be ſuppoſed aptly to allude in theſe beautiful lines:

" Full many a gem of pureſt ray ſerene
" The dark unfathom'd caves of ocean bear;
" And many a roſe is born to bluſh unſeen,
" And waſte its ſweetneſs on the deſert air."

GRAY.

Alike unknown indeed, and uſeleſs to the world, are the *mental* treaſures which thus are buried in obſcurity, as the inanimate objects here deſcribed; but not alike are the effects of neglect on the *animate* and the *inanimate* objects themſelves. The gem loſes none of its valuable qualities, though it ſhould remain for ages hid in the boſom of the dark abyſs; the burſting roſe bud alſo, covered with the dews of heaven, unfolds its opening charms with equal beauty in the tangled glade, and diffuſes its balmy fragrance with the ſame profuſion in the lonely deſert, as in the poliſhed garden, where it miniſters to the delight of admiring princes. Not ſo the *man*. His ſoul, formed with a reliſh for the ſuperior enjoyments of ſociety, if ſuffered to pine in neglected obſcurity, loſes its vivifying principle: its ardent brilliancy fades; and it is ſoon deprived of all thoſe valuable qualities which might render it either agreeable or beneficial to mankind. Whatever, therefore, ſhall have a tendency to remove this evil, and to open a ready intercourſe between theſe valuable characters and congenial minds, will confer a very important bleſſing on mankind.

Such was the general train of reaſoning that ſuggeſted the idea of the preſent work: Nor does the editor ſcruple to own, that the pleaſure he has felt in anticipating the happineſs he may thus eventually be the means of procuring to many deſerving perſons who are now loſt in obſcurity, and in contemplating the benefits that will probably reſult to the community at large from the revivification of ſo much genius, which now lies dormant and uſeleſs, have tended greatly to incite him to attempt the preſent arduous undertaking; and have influenced him in adopting the particular form of this work, the mode of its publication, and the price at which it is offered to the public, as being better adapted than any other he could think of, for removing the inconveniences pointed out, and for diffuſing knowledge very univerſally among thoſe claſſes of men who are at preſent excluded from the literary circle. Its *form* is ſuch as will eaſily admit of its being kept clean and entire till it can be bound up for preſervation: The *time* that will intervene between the publication of each number will be ſo ſhort, as not to allow the ſubjects treated in one to be loſt ſight of before another appears: anſwers to queries may be quickly obtained; and conteſted diſcuſſions will thus acquire an intereſt and a vivacity that cannot be felt in publications that are longer delayed: Nor will thoſe even in the buſieſt ſcenes of life find any difficulty in glancing over the whole at leiſure hours; and the *price* is ſo exceedingly moderate as to bring it within the reach of even the moſt economical members of the community. Thus, he hopes that this performance will become an intereſting recreation and an uſeful inſtructor to the man of buſineſs, and an agreeable amuſement during a vacant hour to thoſe of higher rank.

Nor does the editor confine his views to Britain alone. The world *at large* he conſiders as the proper theatre for literary improvements, and the whole human race, as conſtituting but one great ſociety, whoſe general advancement in knowledge muſt tend to augment the proſperity of all its parts. He wiſhes, therefore, to break down thoſe little diſtinctions which accident has produced to ſet nations at variance, and which ignorance has laid hold of to diſunite and to render hoſtile to each other ſuch a large proportion of the human race. *Commerce* hath naturally paved the way to an attempt, which *literature* alone could not perhaps have hoped to achieve. Britiſh traders are now to be found in all nations on the globe; and the Engliſh language begins to be ſtudied as highly uſeful in every country. By means of the univerſal intercourſe which that trade occaſions, and the general utility of this language, he hopes to be able to eſtabliſh a mutual interchange of knowledge, and to effect a friendly literary intercourſe among all nations; by which man ſhall come gradually to know, to eſteem, to aid, and to benefit his fellow creatures wherever he finds them. The human heart is nearly the ſame at all times; and it is perhaps alike ſuſceptible of piety, beneficence and generoſity among all people, if errors that too often pervert the underſtanding were eradicated. The proper buſineſs of philoſophy is to eradicate thoſe errors which eſtrange mankind from each other, and to extend the ſphere of beneficence among men wider and wider ſtill, till it ſhall comprehend every individual of the human race. Should the editor of this work be enabled to eſtabliſh the foundation of this ſyſtem of univerſal civilization, he would reckon himſelf ſingularly fortunate indeed, and think that he had accompliſhed one of the moſt glorious achievements that can fall to the lot of man to perform. Animated with this hope, his exertions have been great; and he truſts they will not in future be unworthy of the object he has in view. He is happy in being able to ſay, that he has been more fortunate in forming connections with men of eminence in the literary world than he had any reaſon to expect; and were he here to mention the names of thoſe who are to honour him with their correſpondence, it is hard to ſay whether it would moſt expoſe him to be cenſured as vain, or bring his veracity in queſtion. Suffice it therefore at preſent only to ſay, that there is ſcarcely a civilized nation on the globe in which he has not a reaſonable aſſurance of having ſome confidential correſpondents, on whoſe knowledge and zeal in the cauſe of ſcience he can fully rely. It is indeed to that ardour for knowledge among them that he is ſolely indebted for the favourable countenance he has obtained. Into all nations, therefore, where the Engliſh language is in any way known, this work will probably find its way; and of courſe it may be expected that the uſeful diſcoveries, or literary eſſays of ingenious men, will have a better chance of being generally read, and the writers of them made known among men of letters, if inſerted in it, than perhaps in any other publication. To give this work, therefore, the full value of which it is ſuſceptible, the editor warmly ſolicits communications from ingenious men of all nations. Brevity and originality in *ſcientific* diſquiſitions, utility with reſpect to *arts*, accuracy and the moſt ſcrupulous fidelity in regard to *experiments*, nature and truth in the delineation of *real life*, and elegance in polite literature and the *belles lettres*, are what he chiefly wiſhes to obtain. Though utility ſhall ever be his chief aim, he is well aware, that to be able to accompliſh this aim, it is neceſſary that the work ſhould be as agreeable as poſſible. Dry and intricate details, therefore, it ſhall be his ſtudy to avoid. To poliſh the manners and to humanize the heart, he believes to be the firſt ſteps required in an attempt to inſpire a taſte for literary excellence, and to excite exertions for attaining the higheſt perfection in arts. This he hopes to be able to effect, by a careful ſelection of elegant diſſertations, characteriſtical anecdotes, entertaining tales, and lively ſallies of wit and humour, that ſhall be naturally calculated to awaken the attention of youth, and to afford a deſirable entertainment to thoſe of more enlarged underſtanding and cultivated taſte.

It is not, however, on account of the diſſemination of *knowledge* alone that the editor calls the attention of the public to this work; but becauſe it is equally adapted to the extirpation of *error*. Facts, eſpecially when they reſpect diſtant objects, are often imperfectly known, or much miſrepreſented by thoſe who communicate them to the public. When this happens, in the ordinary modes of publication, ſuch miſrepreſentations cannot be eaſily diſcovered. It may be long before ſuch publications fall in the way of thoſe who know the facts with preciſion: and when this at laſt does happen, it requires ſo great an exertion, in theſe circumſtances, to put matters to rights, that few perſons find themſelves diſpoſed to undertake the taſk. Even when this difficulty is overcome, the taſk is but imperfectly accompliſhed. Thouſands may have been miſled by the ſuppoſed fact, who may never have an opportunity of meeting with its refutation. Theſe, in their turn, may reaſon upon the fact, and publiſh it in other works. Error may thus be propagated among millions who never ſhall have an opportunity of getting theſe falſe notions corrected. This could not happen, ſhould the intended miſcellany meet with as general a circulation as it is naturally ſuſceptible of. In that caſe, the publication would ſoon fall into the hands of ſome one who would know with preciſion the facts that occurred in it, even with reſpect to very diſtant objects: And as errors of this ſort might be rectified, in many caſes, by a few lines, which would coſt little trouble to write, and be attended with no expence, nor be ac-

* This obſervation chiefly applies to clergymen in Scotland.

companied with obliquy nor any other disagreeable effect to the writer, there seems to be no room to doubt, that the native love of truth, which is congenial to the human mind, would prompt such persons cheerfully to point out errors wherever they occurred; and as these corrections would come in succession to be read by the very persons who had been at first misled, the evil would be quickly rectified, and this great inlet to error be stopped up nearly at its source. Doubtful facts also, that occurred in other writings, might thus be ascertained; and error be at last so thoroughly ferretted out from all its intricate retreats, as to make TRUTH to reign triumphant over all the regions of science. Such, then, being the great objects aimed at in this apparently humble work, it will not be wondered at that the editor not only does not wish to conceal his name from the public, but is even proud to have given birth to such an undertaking. If his former writings possess any merit at all, they owe it entirely to an unremitting desire in him to promote the general good of mankind; and he trusts, that his efforts to render as perfect as he can, this much greater and more useful performance, may entitle him to hope for a continuance, and an extension even, of that favour, which he has, on all former occasions, so liberally experienced from an ever indulgent public. Should he fail in this attempt, he shall regret it as a misfortune, and ascribe it to the weakness of his powers, that have not been sufficient to rouse the public attention to a subject of such universal moment; and to the accidental waywardness of the times. If, however, he meet with the encouragement that the boldness

to attempt in the present work. Instead of giving a diary of the transactions of parliament, as in a newspaper, he proposes to give a separate history of the rise and progress of each particular bill, announcing always at the beginning the particular objects of the bill, and tracing the amendments it received in each step of its progress through the house; and thus explaining the state in which it is left when passed into a law, or finally rejected; adding himself such occasional remarks as the subject naturally suggests. By this mode of procedure, the account of parliamentary proceedings must indeed be delayed till towards the end of each session of parliament, as it is proposed never to lose sight of one bill till it be finally passed into a law, or rejected. But as the daily proceedings in parliament can be found in every newspaper, this delay can be attended with little inconvenience to the reader; and it is hoped he will receive a satisfaction, in seeing the same subject discussed soon after, and placed in a light somewhat new; and which, from the manner of treating it, if the execution be tolerable, should be more clear and satisfactory than the ordinary accounts of parliamentary proceedings. How far he shall succeed in this department, the public will decide: but it is extremely obvious, that few things are so much wanted in this country, as a more general publication than at present takes place of the laws that affect individuals; and he hopes that this attempt, in a work so much within the reach of all ranks of people, will be received with indulgent candour.

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engaged, as to effect all the purposes this publication is naturally fitted to accomplish. His utmost zeal, however, can prompt him to go no farther, than to be anxious that those who wish well to the undertaking may have an opportunity of once seeing the work, and of judging for themselves of its merit; and if upon trial they shall find it unworthy of their patronage, it is but just and proper they should then give it up. Had private emolument been the chief object with the editor, he is well aware that he would have better succeeded by affixing a much higher price to it: The more general extension of knowledge, however, is certainly a much greater object to aim at.

Still farther to stimulate the attention of the public, and to call forth the latent sparks of genius that may lie hid from public view; it is the wish of the editor to give a set of premiums, annually, rather honorary than lucrative, for the best dissertations on literary subjects. The extent of these premiums, and the variety of subjects selected for them, must ultimately depend upon the encouragement the public shall give to this undertaking. As a beginning however, the following incitements are humbly offered to such ingenious youths as are willing to engage in the honourable contest for literary glory. It is needless to add, that it is the honour of the victory, rather than the value of the premium, that must constitute the principal reward.

To conclude, the editor will thankfully avail himself of every hint, tending to render his work more perfect in any respect; nor does he despair of being able to furnish a miscellany, that shall be entitled to some share of the public attention.

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104 ANDERSON (Jas.) The Bee, or Literary Weekly Intelligence, 18 vols. in 14, 8vo. *numerous portraits, and some woodcuts by Bewick, half calf neat* *Edinburgh*, 1791-3 2 10 0

Complete sets of this Scottish literary periodical are of rare occurrence.

nunications from abroad will be valuable alike for their authenticity, variety and importance. It is not, however, on the communication from abroad that he places his chief reliance, nor on the voluntary assistance of private literary friends; he hopes for communications on interesting subjects, as they occasionally occur, from literary characters in Britain who are entire strangers to him, and will be at all times ready to make such returns as the writers of such essays shall be willing to accept, in proportion to the merit of their performances. He shall only add, that conciseness and comprehensive brevity will ever be to him great recommendations.

The editor cannot pretend to announce this work to his readers as a newspaper. It may serve, however, as a concise register of important occurrences, that admits of being conveniently bound up, to be consulted occasionally, and thus to preserve the recollection of events long after those papers that announced them more fully at the time, shall have been suffered to perish. Though this performance cannot therefore boast the merit of announcing news, it may serve very completely the purpose of an useful remembrancer to those who wish to preserve a distinct recollection of the succession of past events.

In one particular department, he proposes to adopt a method that his friends make him hope will give general satisfaction. In all the newspapers, mention is made of the several bills that are introduced into parliament; but unless it be from the debates that occur on the passing of these bills, the public are no farther informed of their contents than the name by which they are announced suggests. Many persons, therefore, have expressed an earnest wish, that a distinct and authentic account could be given of the characteristic peculiarities of each of these bills, in some performance that can easily be obtained by the public at large. This the editor intends

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*** A particular time cannot be fixed for beginning this publication; as many necessary arrangements must first be made, which may require a longer time than is at present expected. The editor is indeed too anxious to have the work well done, to think of commencing it prematurely. Those at a distance, however, who incline to encourage it, should lose no time in forwarding their orders, as it is probable it may be begun by the time that a return from them can be obtained. It will be advertised in the newspapers before it commences.

†† Subscriptions for this paper will be taken in by all booksellers, or others entrusted with copies of the prospectus, in every part of Great Britain. Or orders and literary communications may be transmitted, post paid, to the Editor, at the printing house of Mundell and Son, Edinburgh, where they will be gratefully received and punctually acknowledged.

† In order to prevent mistakes, it is requested that subscribers will please to write their name and address in very distinct characters; and mention the place, or the post town, where their copies are to be left. Let these directions be as distinct and precise as possible.

†† It is also requested that such subscribers as reside in the country, will be pleased to appoint some person in a post town to pay this paper for them when it falls due; and to mark that person's name, &c. as well as their own when they give their order for it. From those very remote parts of the country, especially, lying beyond Inverness, Fort William and Inveraray, where little commercial intercourse takes place, no orders can be answered, unless this requisite be complied with.

‡*‡ If no particulars are marked, it will be understood that the *common* paper is intended, and it will be forwarded accordingly. Those, therefore, who wish to be furnished either with the *coarse*, or with the *fine* paper, will please to mention it in their order.

☞ *In the first, or some early number of this work, will be given, original memoirs, and* authentic *anecdotes of the late ingenious Doctor William Cullen, the respected preceptor and much esteemed patron and friend of the editor, accompanied with a portrait, which no pains shall be spared to render as exact a likeness as possible, of that truly great and worthy man. As few copies will be thrown off at any time more than are subscribed for, those who wish to be possessed of this work will please to send their orders soon.*

*** *On account of the mode of publication, and other circumstances, it becomes impossible for booksellers to circulate this work, in the usual way.*

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Thus much the editor has thought proper to ſay concerning himſelf, and the motives which have induced him to undertake the preſent work. He is ſenſible that the ſucceſs of it muſt depend entirely on the favourable opinion of the public; and that the beſt apology he can make for any defects that may appear, is a candid repreſentation of the difficulties he has to encounter. He is ſenſible that the ſubjects of which he treats are numerous and various, and that the materials neceſſary for the execution of his deſign are widely diſperſed. He is ſenſible that the ſcheme he has formed is extenſive, and that the execution of it muſt be attended with much labour and expence. He is ſenſible that the ſtyle in which he writes is not adapted to the taſte of the preſent age, and that the manner in which he treats his ſubjects is not calculated to gain the favour of the multitude. He is ſenſible that the work he has undertaken is not ſuch as will be read by the idle and the diſſipated, but by thoſe only who have a taſte for ſolid knowledge, and a deſire to improve their minds. He is ſenſible that the work he has undertaken is not ſuch as will be read by the idle and the diſſipated, but by thoſe only who have a taſte for ſolid knowledge, and a deſire to improve their minds. He is ſenſible that the work he has undertaken is not ſuch as will be read by the idle and the diſſipated, but by thoſe only who have a taſte for ſolid knowledge, and a deſire to improve their minds.

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PREMIUMS PROPOSED FOR LITERARY ESSAYS, &c.

FIRST. *For the beſt written, and the moſt characteriſtic ſketch of the life of any of the great men or philoſophers that follow*; viz. *Galileo*; *Columbus*; *Don Henry of Portugal*; *Tycho Brahe*; *Friar Bacon*; *Alfred*; *Charlemagne*; *Coſmo, or Lorenzo de Medicis*; *Cardinal Ximenes*; *Guſtavus Vaſa*; *The Czar Peter the Great*; *Bacon Lord Verulam*; *The Biſhop of Chiapa*; *The Abbé de Saint Pierre*; *or any other great ſtateſman or philoſopher who appeared in Europe between the revival of letters, and the beginning of the preſent century*; A GOLD MEDAL,—OR FIVE GUINEAS.

In theſe ſketches, ſtriking characteriſtical traits, expreſſive of the peculiar genius and caſt of mind of the perſon, contraſted with the prevailing manners of the people, and modes of thinking at the time, will be chiefly valued. Brevity and force will be high recommendations; but pompous panegyric will be viewed in a very different light. Let facts ſpeak for themſelves: For it is facts, when fairly repreſented, that conſtitute the chief, and indeed the only excellence of the kind of painting here aimed at. The firm boldneſs and accuracy of the touches, not the allurements of gaudy colouring, are here wanted.

SECOND. *For the beſt and moſt ſtriking characteriſtical ſketch of any eminent ſtateſman, philoſopher, or artiſt now living, or who has died within the preſent century*; A GOLD MEDAL,—OR FIVE GUINEAS.

In theſe ſketches, originality and ſtrength of thought, and an exact knowledge of the human mind, will be principally ſought for: Brevity and elegance in the ſtile and manner will be greatly eſteemed; but without candour and impartiality, they cannot be admitted. The cenſure and the praiſe of party writers tend alike to deface all truly characteriſtical traits, and to diſguiſe inſtead of elucidating the ſubject. This muſt be here avoided.

THIRD. *For the beſt original miſcellaneous eſſay, ſtory, apologue, or tale, illuſtrative of life and manners; or effuſion or diſquiſition on any ſubject that tends to intereſt the heart, and amuſe the imagination, in proſe*; A GOLD MEDAL,—OR FIVE GUINEAS.

An original turn of thought; a correctneſs and purity of language; eaſe and elegance of arrangement, and ſprightlineſs of ſtile, when devoid of affectation; will be accounted principal excellencies. Subjects that are cheerful and ſportive will be preferred to thoſe that are grave and ſolemn. But let not affectation be miſtaken for eaſe, nor pertneſs for wit and humour: Neither ſhould ſolemnity be confounded with pathos; for the truly pathetic can never fail to pleaſe.

He begs leave to repeat, that in theſe ſketches or eſſays, comprehenſive brevity is principally required. It is not by quantity *that the editor of this miſcellany means to eſtimate the value of the performances offered to him; but much the reverſe. Thoſe eſſays which comprehend much in ſmall bounds will therefore be always deemed the moſt valuable. He can never be at a loſs for materials to fill his pages; and therefore is anxious that the eſſays offered to him ſhould be compreſſed into as ſmall a ſpace as is conſiſtent with elegance and perſpicuity.*

FOURTH. *For the beſt original eſſay, in verſe; ode, tale, epiſtle, ſonnet, or ſhort poetic effuſion of any kind*; A SILVER MEDAL,—OR TWO GUINEAS.

FIFTH. *For the moſt ſpirited tranſlation, or elegant imitation of any ſelect poem in foreign languages, whether ancient or modern*; A SILVER MEDAL,—OR TWO GUINEAS.

The editor, when he offers theſe two laſt premiums, does it not without fear and heſitation. All the fine arts are pleaſing and attractive; but none of them, he believes, is ſo generally ſeductive to youthful minds, as the allurements of poetry. While imagination is warm, and before a faculty of obſerving things accurately, has formed a juſt taſte for imitative beauties, a facility in making verſes is often miſtaken for a poetic talent; and the ſeductions of ſelf love keep up the illuſion. To theſe cauſes, be is ſenſible, we owe thoſe numerous unintereſting verſes that are perpetually iſſuing from the preſs, which ſerve to diſguſt the man of taſte, and make him turn from the ſight of verſe, though he would be enraptured with genuine poetry, *ſhould it fall in his way. Should theſe ſmall allurements call forth a number of trifles of this ſort, the editor would feel he had placed himſelf in very diſagreeable circumſtances; for if it be unpleaſing even to read ſuch things, it would become in this caſe extremely diſtreſſing, from the unavoidable recollection, that pain muſt be given by rejecting them. The pleaſure, however, he would feel at calling forth, were it but a ſingle line of* genuine poetry, *that modeſt merit might have otherwiſe ſuppreſſed, induced him to propoſe theſe ſmall premiums. The effect they produce will determine whether in future they ſhall be continued or withdrawn.*

It may not be improper alſo to hint, that it will be requiſite that tranſlations and imitations from the poets in foreign or dead languages, be made chiefly from ſuch paſſages as have not already appeared in Engliſh. A repetition of what has already been done cannot be admitted, unleſs it poſſeſs very ſuperior excellence. There is a ſpirit, and fire, and heroic ardour, conſpicuous in "The Songs of a Pruſſian Grenadier," by Gleim; and a yet higher degree of artleſs energy in "The Songs of an Amazon," by Weiſſe, that would be highly captivating to moſt readers, were they known; and among the Lyric pieces of Metaſtaſio, there is a brevity, a ſimplicity, an elegance and paſſion, that has been ſeldom imitated in the Engliſh language. It has perhaps been thought the genius of the language did not admit of it. Neither was it thought that a ſonnet could be written in Engliſh, that could poſſeſs thoſe ſeductive charms that had been admired for two hundred years in the writings of Petrarch, till a lady, well known in the annals of polite literature, very lately ſhewed, that for this ſpecies of poetry, no language was more happy than our own. Under the plaſtic power of genius, language becomes an inſtrument capable of every thing: Where genius is wanting, it is a tool of very circumſcribed powers.

*** *Eſſays intended for this competition, written in the Engliſh language, will be received any time before the 1ſt of January* 1791, *addreſſed, poſt paid, to the Editor, at the printing houſe of Mundell and Son, Edinburgh. To each eſſay muſt be prefixed a few words as a motto; the ſame motto, in the ſame hand writing, being inſcribed upon a* ſealed *paper incloſed in it, containing the name and addreſs of the competitor, or ſuch name and addreſs as he pleaſes to put in its ſtead, if he wiſhes to remain unknown. The ſealed paper belonging to each of thoſe eſſays to which the premiums ſhall be adjudged, will be opened when the premiums are awarded, and the eſſays be publiſhed in this miſcellany. The other eſſays will be returned if deſired; or they will be ſeverally publiſhed, if approved by the judges to whom this matter ſhall be referred, and if agreeable to the writer. At any rate, however, none of the ſealed papers, unleſs it be thoſe belonging to the eſſays to which premiums are adjudged, ſhall be opened; but will be returned, if deſired, to any perſon who ſhall call for them: Or, if not called for within ſix months after the premiums ſhall be adjudged, they will then be burnt, in the preſence of reſpectable witneſſes, who ſhall atteſt that the ſeals were unopened. The ſtricteſt honour in this reſpect may be depended on.*

*** *Orders or communication may be occaſionally addreſſed to the editor, under cover, to Sir John Sinclair, Baronet, M. P. Edinburgh.*

N. B. *Whoever ſhall procure twelve ſubſcribers for this work, and remit the price, at the end of each volume, to the editor, will be furniſhed with a copy for themſelves regularly as publiſhed,* gratis; *and ſo in proportion for any greater number.*

fe of any of the great men or philosophers that follow; viz. Gallileo; Columbus; Don Henry ino, or Lorenzo de Medicis; Cardinal Ximenes; Gustavus Vasa; The Czar Peter the int Pierre; or any other great statesman or philosopher who appeared in Europe between EDAL,—OR FIVE GUINEAS.

r genius and cast of mind of the person, contrasted with the prevailing manners of the people, will be high recommendations; but pompous panegyric will be viewed in a very different ited, that constitute the chief, and indeed the only excellence of the kind of painting here aimed at. colouring, are here wanted.

minent statesman, philosopher, or artist now living, or who has died within the present century;

nowledge of the human mind, will be principally sought for: Brevity and elegance in the iality, they cannot be admitted. The censure and the praise of party writers tend alike to deface ?. This must be here avoided.

illustrative of life and manners; or effusion or disquisition on any subject that tends to interest the UINEAS.

d elegance of arrangement, and sprightliness of stile, when devoid of affectation; will be accounted ed to those that are grave and solemn. But let not affectation be mistaken for ease, nor pertness for the truly pathetic can never fail to please.

ity is principally required. It is not by quantity *that the editor of this miscellany means to Those essays which comprehend much in small bounds will therefore be always deemed the most refore is anxious that the essays offered to him should be compressed into as small a space as is*

or short poetic effusion of any kind; A SILVER MEDAL,—OR TWO GUINEAS.

ect poem in foreign languages, whether ancient or modern; A SILVER MEDAL,—OR TWO

and hesitation. All the fine arts are pleasing and attractive; but none of them, he believes, is so imagination is warm, and before a faculty of observing things accurately, has formed a just poetic talent; and the seductions of self love keep up the illusion. To these causes, he is sensible, n the press, which serve to disgust the man of taste, and make him turn from the sight of verse, *ty. Should these small allurements call forth a number of trifles of this sort, the editor would unpleasing even to read such things, it would become in this case extremely distressing, from the asure, however, he would feel at calling forth, were it but a single line of* genuine poetry, *hese small premiums. The effect they produce will determine whether in future they shall*

ns and imitations from the poets in foreign or dead languages, be made chiefly from such pas- ready been done cannot be admitted, unless it possess very superior excellence. There is a spirit, ier," by Gleim; and a yet higher degree of artless energy in "The Songs of an Amazon," ; and among the Lyric pieces of Metastasio, there is a brevity, a simplicity, an elegance and s been thought the genius of the language did not admit of it. Neither was it thought that a that had been admired for two hundred years in the writings of Petrarch, till a lady, well ies of poetry, no language was more happy than our own. Under the plastic power of genius, ling, it is a tool of very circumscribed powers.

will be received any time before the 1st of January 1791, *addressed, post paid, to the Editor, e prefixed a few words as a motto; the same motto, in the same hand writing, being in- he competitor, or such name and address as he pleases to put in its stead, if he wishes to re- e premiums shall be adjudged, will be opened when the premiums are awarded, and the essays or they will be severally published, if approved by the judges to whom this matter shall be*

other country. The wool, therefore, which is there produced, will not only be fine upon the whole, but of a more uniform texture and ſtrength throughout than other wool *.

The

* What is here ſaid, does not exactly coincide with the opinion of Mr. Le Blanc, as expreſſed in Appendix, No. I. It is eaſy, however, to account for this ſeeming diſcrepancy, in a way that, it is hoped, will prove ſatisfactory to the reader.

The facts here ſtated have been aſcertained in the moſt undeniable manner, by repeated experiments, which are particularly detailed in the performance quoted above, but which it is judged unneceſſary here to repeat.

But Mr. Le Blanc having never, in all probability, heard of theſe experiments, and having obſerved the ſtriking effects produced on his ſtock, by the introduction of another breed of ſheep among them, though no change on the climate had taken place, very naturally inferred that the climate was not to be regarded in any attempt to improve the quality of the wool.

The writer of this article has alſo, from his own experience, found, that the climate has no effect whatever in altering the *permanent* fineneſs of the wool of ſheep; and that this can only be effected by an alteration in the parent ſtock. But his experiments are, at the ſame time, clear and deciſive in proving that any conſiderable alteration in the climate, with reſpect to heat and cold, has a great and irreſiſtable *temporary* effect in altering the fineneſs of the wool, as is ſtated above; and theſe experiments, when they ſhall be repeated by Mr. Le Blanc or others, he is confident, will not fail to operate conviction.

That his meaning here may be clearly underſtood, he begs leave to obſerve, that by a *permanent* change is here meant, ſuch an alteration, as that when this new progeny ſhall be placed *in the ſame circumſtances* with the parent ſtock, it will always produce wool of a quality different from that parent ſtock; and by a *temporary* change, muſt be underſtood an alteration produced on the quality of the wool of the ſame animal *in particular circumſtances only*, and which is of ſuch a nature, that when the animal is placed again in the ſame circumſtances as before, the wool produced then will be of the ſame quality as formerly. For example; when Engliſh ſheep are carried to the Weſt Indies, their cloſe pile of wool is changed into a thin ſort of coarſe hair; but if the ſame ſheep, or their progeny, (if they have not been adulterated by foreign intermixture), be brought back to England,

The mildneſs of the winters there are productive of another advantage in regard to the rearing of wool, which ought to be highly prized in a manufacturing country. For, in conſequence of that mildneſs, ſnow ſeldom lies there;

England, theſe ſheep again produce a cloſe fleece of wool of the ſame quality as before they went away.

I call this ſort of change *temporary*, for the want of a word to expreſs it more properly. For it will readily occur to the reader, that wool thus altered will continue to be of the ſame quality for ever, *if the heat of the climate in which the ſheep are placed continues invariably the ſame.* In this ſenſe, therefore, it might be ſaid to be *permanent*; and as the fineneſs of all wool may be altered by a ſimilar change of aircumſtances, the alteration produced by a change of breed, cannot perhaps in this ſenſe be ſaid to be invariable; and therefore it cannot be called, in ſtrict mathematical accuracy, *permanent:* But being thus explained, it is hoped that no ambiguity can ariſe from the uſe of theſe terms.

Mr. Le Blanc, upon the authority of ſome foreign (with reſpect to Spain) writers, who have treated ſlightly upon the ſubject of Spaniſh ſheep and wool, and who, probably influenced by the general outcry againſt the intolerable privileges belonging to the *Meſta* (ſo the perigrinating ſheep in Spain are called), has adopted the opinion that the fixed ſheep *(eſtantes)* in Spain produce wool equally fine with that of the migrating ſheep. This opinion, when thus vaguely expreſſed, may or may not be true, as the reader will perceive from what has been already ſaid. For if the fixed flocks, to which he alludes, do remain all the year round in the mountains of Leon and Aſturias, or in any other cold place, there can be no doubt but that the wool of ſuch ſheep will be as fine, and in ſome reſpects finer in the pile than that of the ſame breed of ſheep, if it deſcends during the winter, as is uſual, into the warmer plains of Andaluſia. But reverſe the caſe, and ſay that theſe ſheep remain fixed all the year *in Andaluſia*, or ſimilar warm parts of the country, and the caſe would be widely different; for the wool of theſe ſheep would neceſſarily be much coarſer in pile than that of the ſame breed which had paſtured all ſummer on the cool mountains of Leon and Aſturias, or which had travelled to theſe mountains only during the ſummer ſeaſon. This concluſion the writer of this article would have relied on as certain, had he even had no other authority for it but his own experiments. But when theſe experiments are corroborated by the expreſs authority of *Uſtaritz*, the beſt informed of all the Spaniſh writers on this ſubject, who aſſerts that the ſheep which remain in

there; and abundance of food for the ſheep is to be found at all ſeaſons, without trouble or charge to the farmer; whereas, in countries where ſevere cold takes place, and ſnow for a long time covers the ground, the ſheep are apt to

in Andaluſia during the whole year, carry coarſe fleeces, rather reſembling hair than wool, there cannot remain a doubt but that Mr. Le Blanc has been impoſed upon by ſome equivocal expreſſion concerning the fixed ſheep in Spain, to believe that the perambulations of the ſheep there were of no uſe in preſerving the wool. Theſe perambulations, however, as he ſuppoſes, were probably not adopted at firſt with a view to the improvement of the wool, but merely as a neceſſary meaſure for the preſervation of the ſheep. For the mountains during winter are ſo long covered with ſnow, that it would be very difficult to preſerve large flocks of ſheep alive there during that ſeaſon of the year, while the plains are covered with verdure; and in ſummer, the hills produce abundance of rich paſture, while the graſs in the plains is ſo entirely ſcorched as to afford no ſufficient ſuſtenance to numerous flocks; ſo that theſe perambulations became in ſome meaſure neceſſary, and extremely convenient for the preſervation of the ſheep; and the improvement of the wool, in conſequence of that management, has been an unexpected and accidental improvement: But the improvement is not the leſs real becauſe it was accidental.

Mr. Le Blanc's opinion, that the quality of the wool depends upon the *male* rather than the *female*, is equally problematical. Mr. D'Aubenton, from whom this notion has probably been borrowed, goes yet a little farther, and maintains, that the quality of the wool in ſheep, and the hair of other animals, always takes its peculiarities from the *male* only, while the form of the carcaſe itſelf depends on the *female*. The fact, however, is, that among ſheep as well as other animals, the quality of the wool, as well as the ſhape and make of the body, are nearly alike influenced by the male and by the female; though particular inſtances ſometimes occur, where the progeny in general participate more of the nature of the parent of one ſex than of the other: But this happens not to be ſo general in any one way as to give room for any rule to be eſtabliſhed concerning it.

This circumſtance is neceſſary to be here adverted to; becauſe the concluſion drawn from it by Mr. Le Blanc, *viz.* that the nature of the ewe, in attempting to improve the breed of fine-wooled ſheep, is of little or no conſequence, might, if adopted, be attended with very bad conſequences. I enlarge not, however, on the proofs of what is here aſſerted, as the experience

to be ſtinted for food; and, if ever that happens, the wool produced at that time is found to be of a dry and brittle quality, that can never be made to wear well in any fabric of cloth whatever. The wool of theſe regions, therefore, ſhould not only be fine, but ſoft, tough, and elaſtic,

perience of every man who has ever bred ſtock of any kind will be ſufficient, if he be not prejudiced, to convince him of the truth of what is ſaid.

Should a ram only of a fine breed be introduced, the improvement produced *on the whole* would doubtleſs be much greater than if a ewe only had been obtained; for there may be from 50 to 80 lambs produced in one ſeaſon from one ram, though only one or two, or, at the moſt, three lambs could be afforded by one ewe. But by means of a ram only, the breed could never be improved to equal the parent ſtock, as the following reaſoning will fully ſhew.

Let us ſuppoſe that the quality of the fine breed was as *one*, and that of the coarſe as *two*; and that, on an average, the croſs breed ſhould equally participate of the nature of both parents.

The firſt croſs breed produced by the ram, (which would be produced when he was two years old), when compared to the fine ſtock, would be as one and a half to one.

The ſecond croſs, (which, allowing the ewe to be two years old, would be produced when the ram was four), would be, when compared to the fine ſtock, as $1\frac{1}{4}$ to 1.

The third croſs, if the ram lived till he was ſix years old, would be as $1\frac{1}{8}$ to 1.

Suppoſing this ram then to die, and no freſh importation of the parent ſtock, it is plain, that this breed could never be finer than $1\frac{1}{8}$, even if it ſhould be kept from intermixing with the coarſe ſtock. But if a breed of $1\frac{1}{8}$ fine were to mix with the original breed at 2, the croſs would be only the fineneſs of $1\frac{9}{16}$: and ſo on, by every freſh intermixture, the fine-woolled breed would gradually be debaſed; and by approaching nearer to the original ſtock in the country, it would at laſt totally diſappear.

But if along with the ram one or more ewes of the ſame breed were introduced, and kept entirely apart from other rams, the breed would be preſerved in its original purity, the ewes of that breed would increaſe in number, and pure rams could be ſent off from it in abundance, always to go on improving the quality of the croſs breed, till they ſhould at laſt become, in many generations, ſo much the ſame with the other as not to be diſtinguiſhable from it.

elaſtic, to a greater degree than that reared in climates of an oppoſite quality.

Theſe obſervations apply nearly as well to the weſt coaſts of Scotland as to the iſlands. In one other reſpect does the weſt coaſt of Scotland poſſeſs a peculiarity of climate highly favourable to the rearing of ſheep, that has either not been hitherto adverted to at all, or, if it has been taken notice of, it has been rather conſidered as unfavourable than otherwiſe. Theſe countries, when compared with thoſe on the eaſt coaſt, are in general thought to have a much more rainy climate. The fact, however, is, that the quantity of rain which falls upon the eaſt coaſt, is nearly the ſame with that which falls upon the weſt coaſt, throughout the whole year; but the rain falls out at different ſeaſons of the year in theſe two places. On the eaſt coaſt, the rain falls chiefly during the winter and ſpring months, in heavy daſhes; and on the weſt coaſts, the rain is more abundant during the ſummer, and in autumn; and it then falls in frequent gentle ſhowers: and as men are much out of doors at that ſeaſon of the year, and are liable to be wetted by the continued ſhowers, it has been much more taken notice of than that upon the eaſt coaſt, where it falls chiefly at a time of the year when men are, from neceſſity, obliged to keep the houſe in a great meaſure.

The effect of this diverſity upon the ſheep, however, ought to be ſpecially adverted to. On the eaſt coaſt, the rain falling in *winter*, while the wool is long, drenches the fleece, which becomes not only ſo weighty as to prove extremely burdenſome to the animal; but by being kept long wet during that *cold* ſeaſon, the ſheep is chilled by the cold, and rendered thereby unhearty and diſeaſed. The earth alſo, being drenched with water, becomes a puddle; and food being then ſcanty, theſe multiplied calamities taken together, tend much to injure the health,

and to diminiſh the ſtrength of this delicate creature. Thus weakened by the winter rains, it is ill prepared to encounter the hardſhips that the ſpring rains produce, when the wool, at its greateſt length, forms a burden when wet, by which the animal is ſo reduced, as the lambing ſeaſon approaches, as to be often no longer able to ſubſiſt under it, and dies.

The caſe is very different upon the weſt coaſt. The winter ſeaſon being there generally dry, the fleece ſerves to keep the animal warm, without overloading it, inſtead of chilling and oppreſſing it: the earth, too, being firm to the tread, and the herbage dry, the ſheep then continue active and hearty: and, as ſevere rains are rare in the ſpring, they are at that trying ſeaſon in much better health than the others can expect to enjoy. When ſummer comes on, the fleece is removed. The light ſhowers therefore cannot then prove oppreſſive by the weight of the fleece, on account of its ſhortneſs nor chilling to the animal, becauſe of the genial warmth of the ſeaſon. The ſun and the winds then alſo quickly dry them. Theſe ſummer ſhowers, therefore, though frequent, do not in the leaſt incommode the ſheep itſelf; and on the dry hilly paſtures, the rains only ſerve to keep up a conſtant ſupply of freſh herbage, which otherwiſe would have been much leſs abundant. From theſe conſiderations, it plainly appears that the climate on the weſt is much more favourable for breeding ſheep than that on the eaſt coaſt of Scotland. Indeed experience proves, ſince it has been tried, that they thrive better there than elſewhere.

When all theſe circumſtances are duly adverted to, it will, I truſt, appear undeniable, *1ſt*, That the climate of Britain, eſpecially the weſt coaſts of Scotland, is peculiarly favourable for the rearing of fine wool: *2d*, That Britain once did poſſeſs a breed of ſheep that carried wool undoubtedly finer than any other wool produced at that time

time in Europe: 3*d*, That at preſent Spaniſh wool, though probably no finer than it was at the time when it was inferior to that of Britain, is now of a much finer quality than any wool that can at preſent be bought in Britain in quantities ſufficient for the purpoſes of manufactures *: 4*th*, That Britain ſtill, however, poſſeſſes ſome remains of ſheep that carry very fine wool, as well of the ſhort carding

* The circumſtance here mentioned, that has been hinted at in ſeveral other parts of this eſſay, deſerves to be particularly noticed, and the conſequences of it as to the meaſure here propoſed, ſpecially adverted to. There is not any reaſon to believe that Spaniſh wool is now in the ſmalleſt degree finer than it was at former periods, when it was of an inferior quality to that of Britain; and if it be now the fineſt of the two, it is owing to the debaſement of our wool, and not to the melioration of theirs. This leads us to obſerve, that the words *fine* and *coarſe* are merely relative terms, that denote no definite and preciſe ſtandard of quality. The wool, therefore, which in one age acquires the name of *fine* wool, may perhaps be of a much coarſer quality than that which obtained the ſame name at another period. A neceſſary conſequence, however, of a change in this reſpect will be, that *fine* cloths, which at a period when the *very fineſt* wool could be obtained in the market, will poſſeſs a delicacy and ſoftneſs of texture, when compared with other kinds of goods that may be employed as clothing, which they will not poſſeſs at thoſe times when the wool that obtains the name of the *fineſt*, is of a coarſer pile and harder texture. This circumſtance will neceſſarily tend to render woollen goods more in vogue at the one period than at the other; though this circumſtance will not be in general adverted to. This is probably one reaſon why woollen goods have been in leſs repute during the preſent century than at ſome former periods.

Another inference to be drawn from this circumſtance, which it imports us here more particularly to advert to, is, that though a particular kind of wool may have, for a time, occupied the higheſt place in the market, and been deemed the fineſt in the univerſe, it may, nevertheleſs, be indeed of ſuch an inferior quality to ſome other kinds of wool that have been neglected, that when theſe kinds of finer wools ſhall come to be reared by the attention of ſome patriotic community, in ſuch quantity as to admit of furniſhing materials for extenſive manufactures, they may ſo far excel the wool that was formerly fineſt, as to baniſh it from the market, or make it hold only the ſecond or third place in the ſcale of fineneſs.

Even

as the combing ſort, both of which are degenerating and may ſoon be entirely loſt, if not at preſent retrieved: *5th*, That it would be an eaſy matter to ſelect the beſt of each of theſe breeds at the preſent time, to be ſet apart for the ſake of experiment: *6th*, That Britain poſſeſſes peculiar advantages in regard to the carrying on this claſs of experiments, that no other rival nation can boaſt of, by means of which it is perfectly eaſy to have the intrinſic value of any particular breed aſcertained with the moſt perfect accuracy, though in other parts of the world this be morally impracticable: *7th*, That if our own ſheep ſhould not be found to carry wool ſuited to every purpoſe wanted, it is ſtill in our power, by ſelecting other valuable breeds of ſheep from foreign countries, to obtain thoſe peculiarities that ſhall be wanted; and thus, by perſevering

Even though no wool in the world ſhould be found of a ſuperior degree of fineneſs to that which bore the higheſt vogue at the time, it is not at all impoſſible, from the above ſtated facts, that a finer kind may ſtill be produced by attention and care, in proper circumſtances; for, if a kind of ſheep ſhall be found in a *warm* climate that yields wool of a quality as fine, though no finer, than that afforded by another breed of ſheep that live in a *colder* region, it is a matter of certainty, that if the beſt of that breed ſhall be tranſported from the warm climate to a colder, a kind of wool would be thus produced, of a finer texture than ever before was known on the globe.

Upon theſe principles, I think I am well founded to conclude, that Britain may once more regain a ſuperiority over Spain in reſpect to the fineneſs of wool. Nor is this all; ſince it is well known that there are ſheep in other parts of the world, that do at preſent yield wool of a quality greatly ſuperior to that of Spain; and as ſome of theſe ſheep are found in regions that are probably warmer than Scotland, there is reaſon to believe, that if theſe ſheep were tranſported hither, and carefully preſerved, Britain might in time acquire wool, not only finer than that of Spain, but perhaps of a more delicate texture and finer quality *than any wool that has been hitherto produced on the globe.* Were this the caſe, it is hard to ſay what might be the delicacy of the fabrics the ingenuity of our manufacturers might contrive to make of it, or the demand that might in time be made from all nations for thoſe delicate fabrics, which thus might be in a meaſure excluſively the production of this nation.

ing in a ſet of accurate experiments, we may, by due attention, be enabled in time to rear, not only finer wool than is to be obtained from any other country, but may alſo be able to conjoin with it every other valuable peculiarity, ſuch as, cloſeneſs of fleece, a good mould of carcaſe, hardineſs, a capability of being eaſily fattened, largeneſs of ſize, and every other valuable quality, adapted to every peculiarity of ſituation in the iſlands.

Such are the important objects that may be effected by a continued attention to the ſubject that now claims the deliberations of the Gentlemen of this Society.

POSTSCRIPT.

As ſome arguments of importance occurred in the courſe of the deliberations of the Society on this ſubject, it is proper they ſhould be here mentioned, with the anſwers.

It was juſtly obſerved, that *profit* is, and ever muſt be the object of the farmer's attention in chooſing a kind of ſheep to breed from; and that general experience is perhaps a better proof of that profit than any other criterion that could be adopted. But ſince experience has proved that the breed of coarſe-woolled ſheep has been gradually making encroachments on the fine-woolled ſort, ſo as at laſt to baniſh them entirely from the beſt part of this iſland; this ſeems to afford a clear and convincing proof, that it has been found univerſally to be more profitable to rear the coarſe-woolled ſheep than the others; and as this inconvenience may be expected to be felt in future as well as in times paſt, it ſeems to be a vain attempt to endeavour to retrieve that fine-woolled breed.

To this it may be anſwered, that though the argument be fair and plauſible, the concluſion cannot, in this caſe, be admitted as juſt. By the ſame mode of reaſoning,

ing, an oppoſite concluſion might have been drawn on this ſubject, before the days of Elizabeth: For, during that time, it appears that the fine-woolled ſort kept their ground, and conſequently were at leaſt equally profitable with the others, though that fine wool, at that time, could not be ſold at a foreign market, without being loaded with a high duty: and as it then ſold in foreign markets at a price equal at leaſt to that of Spain, it muſt have been ſold *in England* at a price much below what Spaniſh wool could have been afforded for there, had it been brought to this market. But if it was profitable to rear fine wool in this country, when it ſold for a lower price than Spaniſh wool of the ſame quality, it ought to be more profitable to rear it now, when it could be ſold at a price equal or ſuperior to that of Spain, if its quality ſhould be equal or ſuperior to Spaniſh wool.

From this train of arguing, it ſeems natural to conclude, that were circumſtances the ſame in this nation as formerly, and were the fine-woolled and coarſe-woolled breeds of ſheep equally eaſy to be had, it ought to be now much more profitable to rear the fine than the coarſe-woolled ſort: But neither would this concluſion be ſtrictly juſt.

We have already traced the cauſes of the degeneration of our wool; but in conſequence of that debaſement of its quality, it is a certain fact, that though the deſtructive laws that produced this effect were repealed, and things were put upon the ſame *legal* footing as formerly, it will require long and continued exertions, before things could be put into the ſame actual ſituation with reſpect to the farmer, and to enable him to derive the ſame profit from his fine-woolled ſheep, that he then could eaſily have obtained.

Not only is it difficult for him now to procure the beſt breeds of ſheep—not only is it difficult, and extremely expenſive

expenſive for him to preſerve that pure breed, in the preſent ſituation of things, from being contaminated, by intermixing with others, as has been fully proved above—both which circumſtances muſt greatly diminiſh his profits, ſhould he attempt to proſecute this improvement:—not only do theſe things ſtand perpetually in his way, as a powerful bar to his exertions; but, were they even removed, and were he actually to become poſſeſſed of wool of a very fine quality, it will be long before he can have it in his power to avail himſelf of that advantage, or to derive a profit from that wool, proportioned to its intrinſic value.

It has been already remarked, that very fine wool is actually at preſent produced in ſome remote parts of Scotland, and its iſles; but that this wool, from the ignorance of the natives, is often applied to very inferior uſes; and a ſtronger proof of that cannot be afforded, than the experiment now under the eye of the Gentlemen of this Society. Some pairs of Shetland hoſe, that were bought in Edinburgh at 5½ d. *per* pair, and which probably were ſold at firſt hand at or below 3 d. weighing, each pair, about half a pound, have been untwiſted, ſo as to diſcover the materials of which they were made. This wool conſiſts in part of a very coarſe ſort indeed, reſembling hair; but a conſiderable proportion of it is very fine wool, of an exceeding ſoft texture, which a manufacturer, who muſt be a judge of that matter, declared would be worth 4 s. the pound, were it entirely freed from the coarſe wool with which it is intermixed. Suppoſing, then, one half of it to conſiſt of that fine wool, we would here have at leaſt 1 s. worth of fine wool given away *for nothing*; for undoubtedly the workmanſhip, and the remainder of the coarſe wool, is worth more than the price for which the ſtockings were originally ſold. When ſuch is the way in which fine

wool

wool is disposed of, can it be a wonder, if the sheep that produce it, should not, in these circumstances, be profitable, though, in other circumstances, they might be highly advantageous.

Fine wool, where it can be obtained at all, in consequence of improving the breed, can only be obtained, at first, in small quantities: And in a remote country, where this object has been long neglected, it is impossible to find a wool-sorter who could put it into a state so fitted for the market as to yield nearly the price it ought naturally to have given. If the farmer tries to send it to market, therefore, it must *to him* be a losing game, though in other circumstances it might have been highly lucrative.

But can it be supposed that the farmer, in these circumstances, will ever be able to send it to a proper market? Were it even sorted to his hand, the *small* quantity he has to spare, neither renders it an object of sufficient importance to him, nor does he know to whom to consign it, without danger of being imposed on; nor can it bear the expence of bonds, cockets, freight, and charges*. Were it therefore of ever so great value, he cannot reap profit from it; so that, unless measures shall be adopted for removing these difficulties, the attempting to introduce a breed of fine-woolled sheep into a distant part of the country, can never be profitable to the individual who begins it, however profitable it might be to individuals, and

* The bonds, freight and charges for a few pounds of wool, as the laws of Britain stand at present, if sent by sea, could not be under twenty or thirty shillings, and might, in certain circumstances, be much more; besides the danger of subjecting the owner to high forfeitures in case of any accidental breach of forms required by law, which an uninformed farmer, in a remote corner of the country, never can be acquainted with. The dread of those evils must therefore prevent him from ever thinking of engaging in such a dangerous enterprise.

and to the public at large, after it had been fairly introduced. It is neceſſary, therefore, that ſome ſociety, or joint body of men, who can act in concert, ſhould pave the way for a national improvement of this ſort.

One other objection may be mentioned before this long memoir be cloſed: It is a prevailing opinion, that ſheep which carry fine wool are always, and neceſſarily, of a more diminutive ſize and delicate conſtitution, than thoſe which carry coarſe wool, and afford likewiſe a ſmaller quantity of wool; therefore it has been ſuppoſed that the large, as well as the hardy breeds of ſheep, ought to be extirpated, were the improvement of Britiſh wool attempted. This, however, is a great miſtake; for largeneſs of ſize is by no means neceſſarily connected either with fineneſs of wool, hardineſs of conſtitution, or weight of fleece. It is indeed true, that the fine-woolled *Highland* breed is a ſmall-bodied ſheep; but the coarſe-woolled ſheep in Shetland are of as ſmall a ſize as thoſe of the *kindly* ſort, and in every reſpect as tender; and every body knows, that the South Country breed of Scotch ſheep, which carry very coarſe wool, and are in general eſteemed very hardy, though larger than the Shetland breed, is much ſmaller, and yield lighter fleeces, in proportion to their ſize, than ſeveral kinds of Engliſh ſheep which carry wool of a very fine ſtaple. The fine-woolled Spaniſh ſheep, I am aſſured from the beſt authority, is a large, well bodied hardy ſheep, much larger than any breed commonly reared in Scotland; and the Thibet ſheep, which carry the fineſt wool in the world, is ſtill of a larger ſize; being conſiderably larger, by the accounts I have received, then the largeſt ſized Engliſh ſheep. Fine wool, therefore, may undoubtedly be obtained without diminiſhing the ſize of the carcaſe of the ſheep in the ſmalleſt degree, and alſo without diminiſhing the weight of the fleece, or loſing any other peculia-

rity that could render any particular breed peculiarly desirable *. This would, no doubt, require pains and a careful selection of the best breeds, wherever they could be found, and an attentive and cautious procedure; but no one can easily imagine how much can be done by attention in this respect. Mr. Bakewell's success has been already taken notice of; and though my own experiments on sheep were continued only for three years, yet even in that time, I had some wool that measured full half a yard in length, which was equally fine as the best Spanish wool I could find, and greatly softer than it to the touch. I have seen no English combing wool so fine as this was. If such were the effects of only three years attention, in a situation that did not admit of an accurate seclusion of different breeds at the rutting season, what might be expected from a course of experiments conducted on a more enlarged principle than I could afford to attempt, in a place where an entire seclusion of breeds could be easily effected, continued for half a century? No one can pretend to say to what perfection we might arrive: But there is every reason to believe, that not only finer wool would be obtained, of every different quality that can be wanted for the various kinds of manufactures, in greater perfection than can at present be found in any part of the world, and that along with it might be conjoined every other valuable peculiarity of carcase or otherwise, that can render any particular breed at present desirable.

N. B. I have not taken any notice above of some popular stories commonly circulated concerning the breed of fine-woolled Spanish sheep having been obtained from England, or the breed of English sheep having been obtained

* See Essays relating to agriculture and rural affairs, vol. ii. disquisition xxxix. where this matter is more fully treated than the limits of this essay permitted.

ed from Spain; both of which ſtories, though directly contradictory, are aſſerted with equal confidence; and for aught I can learn, are entitled to equal credit; as I have not been able to find any authorities that confirm either report: and they are here mentioned only that the reader may not think they have been inadvertently omitted.

A more probable account is given by Mr. Carlier of the origin of the fine-woolled ſheep in Spain, though I am far from thinking it indiſputable. Columella ſays that his uncle, Marcus Columella, introduced ſome rams from Barbary, which helped greatly to improve the quality of the wool of Spain. The ſame experiment is ſaid to have been repeated by Don Pedro IV. king of Caſtile, in which he was followed by the great Cardinal Ximines, who thus is ſaid to have ſecured to his country the pre-eminence in that reſpect, for which they have been ſince that time ſo juſtly famous *. I have not, however, had an opportunity of inveſtigating this laſt part of the Spaniſh hiſtory with ſuch attention as to enable me to ſpeak of it with certainty. Mr. Carlier aſſerts it as fact without heſitation; and if it ſhall be found to be true, it affords a ſtrong inducement for us to exert ourſelves to recover our fine wool, by adopting a ſimilar conduct, and trying the Barbary and other breeds of ſheep.

* Traité des bêtes à laine, par M. Carlier, p. 13.

No. V.

Directions for ſelecting Sheep in the Northern and Weſtern Iſlands of Scotland.

TO aſſiſt thoſe who, from the foregoing conſiderations, ſhall be inclined to ſelect a particular breed of fine-wooled ſheep, for the ſake of experiment, among the Northern or Weſtern Iſlands, the following particulars are recommended to their attention.

1*ſt*, As the fineneſs of the pile, and the ſoftneſs of the texture of the wool are, in this caſe, the peculiarities chiefly wanted, theſe are the circumſtances that ought to be adverted to, as of the moſt eſſential importance. No other particular, therefore, ſhould counterbalance a ſuperior degree of fineneſs of pile, in any caſe.

2*d*, But in caſe two ſheep are found which are entirely equal in theſe reſpects, that one which has the feweſt hairs through the fleece ought certainly to be preferred; for although theſe hairs may be ſeparated, as the natives of Shetland experience, by letting the wool riſe entirely from the ſkin, without being ſhorn; yet in large flocks that practice would become extremely inconvenient, and the neceſſity of having recourſe to it ſhould be guarded againſt.

3*d*, If fineneſs and purity are equal, that ſheep which has the cloſeſt pile, or thickeſt fleece, ſhould be preferred.

4*th*, If fineneſs, purity, and cloſeneſs of pile, be equal, prefer that which has the greateſt uniformity in the texture of the whole fleece.

5*th*, All the above named particulars being equal, the general ſhape and figure of the animal ought to influence the choice: A round compact body, a full and deep

cheſt,

cheſt, ſtraight back, ſtraight firm legs, neither very long nor too ſhort, and a ſtrong hardy figure upon the whole, with a lively mild looking eye, are the particulars reſpecting ſhape that ſhould be preferred; but this circumſtance ſhould be a ſubordinate conſideration to thoſe already enumerated.

6th, All other circumſtances being equal, that ſheep which is in the beſt condition at the time, if their paſture has been nearly equal, ſhould always be preferred.

7th. Laſtly, If two ſheep ſhall be found which are equal in all the foregoing reſpects, that which is of the largeſt ſize of the two may be preferred: but it ought ever to be adverted to, that for mountainous countries of difficult acceſs, and where a wide range of paſture is neceſſary, largeneſs of ſize is not a quality that ſhould be much coveted.

*** In chooſing ewes, the ſame peculiarities ſhould be adverted to as in chooſing the rams; and in all caſes the ewes ſhould be choſen, as nearly as they can be found, of the ſame quality with the ram. It is only after the beſt breeds are once got, pure, that experiments ſhould be tried, to ſee what will be the effect of croſſing with others.

†*† In every caſe, the *colour* ought to be particularly adverted to; and though there may be exceptions, it will be found that a pure white breed is, upon the whole, the beſt colour for general uſe, as white wool admits of being dyed of all colours with greater facility than any other.

‡*‡ If, however, a breed of ſheep ſhall be found of a light brown, or fawn colour, of a pure ſilver grey, with a fine ſilky gloſs, which is not apt to change colour by wear, or of a pure black; and if any one inclines to try to improve

improve these particular breeds, it may be a very proper subject for experiment. But in every case of this sort, the ram and the ewes selected ought to be exactly of the same kind, and should be carefully put apart by themselves, till such a quantity of this wool could be obtained as might serve to ascertain what were its peculiar qualities, and its intrinsic value. In no case should any sheep be selected to breed from, that are spotted in any way; for that peculiarity can never be beneficial to the rearer.

†§ It is understood that the wool of the Highland sheep is in general of a short staple, and fitter for being carded than for being combed; but it is not impossible but that among the varieties of sheep that exist among those neglected and unknown regions, there may be some breeds found, that bear wool which might admit of being combed; and if such a thing could be found, of a fineness and softness of texture equal to the other, it would prove a very valuable discovery. It is therefore recommended to the gentlemen and others in those regions, to be attentive to this particular; and if a ram of this breed can be found, to try, if possible, to obtain some ewes that have the same quality of wool, to be put apart for obtaining a a breed of this kind. If I mistake not, this peculiarity may at present be expected to be found more readily among those of a silver grey than the others. In choosing sheep to breed from of this colour, all those should be rejected where the white filaments are not of a very pure lustre, and the black of a clear shining glossy transparency, and pure black.

†§† Those who have not adverted to the effects produced by selecting proper breeds of sheep for breeding from, but who have been accustomed to let their sheep run promiscuously,

miſcuouſly, and breed together without any ſelection, can have no idea of the ſurpriſing effect that an attention continued for a few years would have on improving the wool, the ſhape, the temperament, and general hardineſs of their whole flock, and will therefore be inclined to look upon theſe directions as unneceſſary refinements. The natives of the iſles, however, may reſt aſſured, that theſe obſervations are the reſult of experience, and not of ſpeculative reaſoning; and that, if any of them ſhall make trial of ſelecting a few ſheep, and of ſecluding them during the rutting ſeaſon, from all others, they will themſelves be aſtoniſhed at the effects; and they would be very agreeably ſurpriſed to find that they might be able to obtain from three to five ſhillings for every pound of their wool, which they undoubtedly might do, were it improved to the utmoſt degree it is ſuſceptible of. It deſerves alſo to be here repeated, that the ſheep which carry the fineſt wool, if carefully ſelected, are in general equally hardy, equally eaſily fed, and yield fleeces of equal weight, and may poſſeſs every other valuable quality in an equal degree with other ſheep, that yield the coarſeſt wool that can be found.

‡||‡ It is ſurely unneceſſary to add, that ſheep which are known to have any diſeaſe, eſpecially if that diſeaſe be likely to affect the progeny, ſhould on no account be ſelected to breed from.

N. B. It may be proper to obſerve, that if ſheep are at any time intended to be tranſported to a diſtance, to compete for premiums or otherwiſe, it is of great importance they ſhould be tamed, and rendered as familiar with men as poſſible. This is eaſily effected, if they be brought near to the habitations of any perſon while they are lambs, as they can then be eaſily tamed, and may be made

made as familiar as a dog, ſo as to admit of being carried to any diſtance, without danger to themſelves, or difficulty to thoſe who conduct them.

†‖† If males or females of a particular breed are to be brought from a great diſtance, it will always be neceſſary to ſend two or more of each ſort, to ſupply the want, in caſe of death or accidents by the way.

¶ In caſe any ſheep ſhould be obtained from diſtant places, the following experiment is recommended, with a view to mark the changes that ſhall take place, in reſpect to the wool of the ſame animal, in conſequence of a change of climate, or other circumſtances.

Before the ſheep be removed from its native country, let a lock of wool be cut from the ſheep, and put up with a proper tally for preſervation, that it may be compared with the wool of the ſame ſheep cut from the ſame place, at any future period.

And that the wool may always be taken as nearly as poſſible from the ſame part of the body of the animal, let the following mode of aſcertaining that particular be adopted. Take a ſmall cord of a ſufficient length; let one end of it be applied exactly to the joint at the knee of one of the fore legs; then lay the cord lightly acroſs the body in as ſtraight a direction as may be, till it reaches the other fore knee: Mark the cord there, and then double it; and double that once more, ſo as to mark the fourth part of the whole length: put a pin into the cord at that mark, and lay it once more acroſs the ſheep as before; and at the place directly under the pin on the right ſhoulder, cut out the lock of wool wanted, and lay it up for preſervation. Next year repeat the ſame operation, and in like manner cut out a lock of wool for compariſon; and

ſo

ſo on annually as long as the experiment is to be continued, always tallying each lock, ſo as to mark diſtinctly the individual ſheep from which it has been taken, and the preciſe time and place when and where the lock was cut.

It is plain, that as no fixed meaſure is here aſſumed, but only a *proportional* length, any alteration that may take place in the ſize of the animal will occaſion ſuch a ſmall variation as to the place where the wool is cut, as to occaſion no ſenſible miſtake. Were a lock of wool thus cut from any number of ſheep, at ever ſuch a diſtance from each other, it would afford a good method of forming a judgment of the comparative fineneſs of the wool.

No. VI.

Plan of a Patriotic Aſſociation for the Improvement of Britiſh Wool. By Doctor Anderſon.

IT is propoſed to eſtabliſh a new Society, whoſe *ſole* object ſhall be to adopt meaſures for obtaining the beſt breeds of fine-woolled ſheep, and of other domeſticated animals, carrying fine fleeces or furs, with a view of aſcertaining, by actual experiments, how far each ſpecies is calculated for the climate of this country—the qualities of their wool reſpectively—the uſes to which each kind could be moſt profitably employed in different manufactures—and the comparative value of each ſpecies, ſo far as the ſame can be determined.

The name of the propoſed Aſſociation to be, *The Society for the Improvement of Britiſh Wool.*

The Society to conſiſt of an indefinite number of members. Each ordinary member to contribute One Guinea

per annum, or Ten Guineas on being admitted, towards effecting the objects of the inſtitution. Every member to be at full liberty to withdraw his name, on giving notice to the Secretary in writing, at leaſt one month previous to the general meeting to be annually held for the purpoſe of chooſing new members, and of inquiring into the progreſs made by the Society.

The money ariſing from the ſubſcriptions of the members to be paid into the hands of a Treaſurer, and put under the management of a Preſident, a Vice-preſident, and fifteen Directors, to be choſen annually, by ballot, at the general meeting. The Committee to have power to tranſact all the ordinary buſineſs of the Society, in conformity to ſuch general principles as may be laid down at the annual meeting. The Committee to be accountable to the Society for their proceedings; an account of which ſhall be annually printed for the uſe of the members of the Society, and for the information of the public.

Thoſe who contribute Two Guineas *per annum*, or Twenty Guineas at their admiſſion, to be called Extraordinary Members; and, in the event of an equality, the member who was firſt admitted into the Society amongſt theſe members, to have a double vote, in all caſes where any doubt as to the majority of votes occurs.

The above to be conſidered as fundamental rules of the Society: All other ſubordinate regulations to be left undecided until the Society is conſtituted, when theſe matters ſhall be adjuſted according to the opinion of the majority of the members met to deliberate on the ſubject.

It is propoſed, that Sir John Sinclair, as Convener and Chairman of the Committee on Wool, ſhall tranſmit the report he has drawn up for the uſe of the Highland Society, to ſuch perſons, whether in Scotland or England, as are the moſt likely to encourage ſo uſeful an under-

taking,

taking, and ſhall take ſuch other ſteps as may tend to promote the eſtabliſhment of the propoſed Society, without delay; and in particular ſhall requeſt Sir Joſeph Banks, Preſident of the Royal Society, and other public-ſpirited individuals, who have already devoted their attention to the melioration of Britiſh wool, to co-operate in forming a plan that may prove of ſuch general benefit to theſe kingdoms.

It is farther propoſed, that the original members, or founders of the Society, ſhall concur in a reſpectful application to the King, as the father of his people, and the patron and ſupport of every uſeful undertaking for the benefit of his ſubjects, and whoſe attention to this particular ſubject is ſo well known, that his Majeſty would be graciouſly pleaſed to take this infant Society under his protection, and would confer on it the name of *The ROYAL Society for the Improvement of Britiſh Wool*; and that application ſhould alſo be made to his Royal Highneſs the Prince of Wales, and to the other Princes of the Royal Family, for permiſſion to inrol their names among the members of the ſaid Society.

By the exertions of ſuch an Aſſociation, the experiments which might be tried under its directions, and the knowledge which it would rapidly diffuſe on this ſubject, in every corner of the kingdom, it is probable that the value of the wool of Great Britain, great as it may appear at preſent, *might be doubled*, and occupation found for many thouſands, who may not otherwiſe be able to find the means of induſtry and of employment.

N. B. It is hardly neceſſary to remark, ſince it can have no influence with any perſon of real public ſpirit, that, in the courſe of a very ſhort period, the ſubſcription of every member of the Aſſociation may probably be repaid, from the increaſe and profit of the ſheep, originally

purchaſed by the contributions of the Society, and multiplied under its direction; and thus merely by the temporary advance of a ſmall ſum of money by each contributor, *a great public benefit* will be inſured, without almoſt the riſk of loſs to any individual of the Aſſociation.

No. VII.

Obſervations on the Advantages that might be derived from SNOW PLOUGHS *, *by the Sheep Farmers in the Highlands, and on the Increaſe of Sheep Farms in that Part of the Kingdom.*

IN Sweden, where particular attention is paid to the public roads, and to the beſt means of preſerving them in repair, they have invented a very ſimple machine for clearing their roads of ſnow in the winter ſeaſon, to which they have given the name of the *Snow Plough*. It

* In Marſhall's Rural Economy of Norfolk, vol. i. p. 59. a ſimilar machine is deſcribed among the other implements of huſbandry in that part of the country, under the name of the *Snow Sledge*. This beautifully ſimple implement, he obſerves, is uſed for uncovering turnips buried under a deep ſnow. It is ſimply three deals or other boards, from one to two inches thick, ten or twelve inches deep, and from ſeven to nine feet long, ſet upon their edges in the form of an equilateral triangle, and ſtrongly united with nails, or ſtraps of iron at the angles, at one of which is faſtened, by means of a double ſtrap, a hook or an eye, to hang the horſes to. This being drawn over a piece of turnips covered with ſnow, furrows up the ſnow into a ridge on each ſide, while, between the ridges, a ſtripe of turnips is left bare, without having received any material injury from the

It is of triangular ſhape, and though of a very ſlight conſtruction, ſo that two men can eaſily carry it, anſwers the purpoſe effectually. At the point there is a block about eighteen inches in height, through which there is a ſtrong timber pin for the purpoſe of faſtening the horſes, and by which the machine is dragged in a manner ſimilar to the common harrow. There are two deals of the ſame height, nailed on each ſide of the block, of from eight to ten feet in length, and of the ſame width or diſtance from each other at the extremity. About two feet from the end of the deals, there is a croſs deal to keep the other two firm and ſteady. The deſcription I had drawn up of the machine being loſt, it is only from a very imperfect recollection of it that the preceding account is given.

It is believed, that this machine may be of conſiderable ſervice in clearing the roads of ſnow in many parts of Great Britain. But its utility to the ſtoremaſter or ſheep farmer, is a matter of ſtill greater importance. At preſent, when the ground is covered with ſnow, there are no means to procure food for ſuch multitudes of ſheep as are now kept in many parts of the Highlands, but by teaching them to rake up the ſnow with their feet ſo as to get at the top of the heather; and when the froſt has alſo begun, the ſurface muſt be broken by harrows, otherwiſe none but very experienced ſheep will attempt it. But with one or two of theſe machines, and half a dozen of ſmall horſes, many acres may be cleared in a few hours, where the ground is not ſtony, and the ſnow has only recently fallen. If the froſt has begun to harden the top, harrows muſt previouſly be made uſe of. By means of theſe machines, the ſnow may be laid in ridges, with intervening ſpaces of from 25 to 30 feet perfectly clear of ſnow; and thus, at the ſmalleſt poſſible expence, the farmer may always command abundance

dance of paſture for his flock, even in the depth of winter *.

There are doubtleſs many reſpectable friends to the proſperity of the Highlands, who, diſliking the increaſe of ſheep farms, may not be inclined to reliſh any idea that can tend to render them leſs hazardous, and conſequently more prevalent. Nor is it poſſible to form a decided opinion on the propriety of extending ſheep farms in that part of the kingdom, without more experience than we have as yet acquired, and more facts to judge from, than have as yet been collected. The Highlands at preſent are in general peopled by a number of ſmall farmers, who maintain themſelves by the produce of the ſmall ſpots of arable land they cultivate, and who pay the rent of the landlord, from the profit of the cattle they poſſeſs. The indolence in which they can indulge themſelves, and the abundance of fuel they enjoy (an important article in a cold climate), with the natural attachment which every individual muſt feel for his native ſoil and birth-place, make them attached to that mode of living, and unwilling to quit it. In a public view, alſo, a brave and hardy race of men, who, without much detriment to agriculture, or to commercial induſtry, can at once be converted into ſoldiers, is an object of great importance; and the want of which, were it loſt, the public might ſenſibly feel, in very critical emergencies †. At the ſame time it is certain, that the rent

* It is ſuppoſed, that every ſheep farmer will preſerve the leaſt ſtony, and moſt fertile part of his farm, for the expreſs purpoſe of winter paſture, to be cleaned of ſnow by theſe machines. In that caſe, his flock can never periſh for want of food.

† There is a ſtriking alteration in the appearance of the people, where ſheep farms have taken place in the Highlands. Being better clothed,

rent and value of Highland property might be doubled; and, in proceſs of time, tripled, nay, quadrupled, by ſheep farming *. By ſheep alſo, the preſent heath-covered mountains of the Highlands would be rendered green and fertile, and greatly more productive than at preſent. Whilſt, by improving and extending the fiſheries, and by eſtabliſhing towns and villages, in proper ſituations for the woollen and other manufactures, the actual population of the country might not be diminiſhed, yet the general face and appearance of it, and the value of its productions, might be greatly improved †.

As this is a queſtion of conſiderable moment to the general intereſts of the empire, it would well become ſo reſpectable a body of men as the Highland Society, to have a ſubject with which they are ſo peculiarly connected, probed to the bottom. For that purpoſe, it might be proper to aſcertain, 1. What diſtricts in the Highlands, now in a great meaſure occupied as cattle farms, are calculated for ſheep. 2. What may be the rent of theſe diſtricts at preſent, and what would be their value under ſheep. 3. What is the population of theſe diſtricts, and to what would the population be reduced, if ſheep farms univerſally took place. *Laſtly*, Could any meaſures be adopted, by encouraging fiſheries and eſtabliſhing manufactures, and by erecting towns and villages in the iſland, as well as the maritime parts of the country, that would effectually counteract the deſtructive conſequences of ſheep farms, and prevent the depopulation of the country.

* The number of ſheep that might be maintained in the northern and and weſtern iſlands, and the value of their fleeces, were fine-woolled ſheep alone reared in that part of the kingdom, would far exceed the moſt ſanguine calculations of thoſe who have as yet inveſtigated that ſubject.

† Some new articles of produce might alſo be introduced; for inſtance, the *Fromage de Roquefort*, a village in the province of Rouerque, near Languedoc, where great quantities of ewe milk cheeſe is made, which ſells at a very high price, and is much in requeſt.

No. VIII.

An Account of the Steps which have been already taken for attaining the Objects mentioned in the preceding Report, from the beginning of June, when the Inquiry was originally ſuggeſted, to the Middle of Auguſt 1790.

DIRECTIONS were given for purchaſing ſome of the fineſt woolled ſheep, and ſpecimens of the fineſt wool that could be procured in Shetland, and for tranſporting the ſame to Leith by the firſt opportunity.

Mr. Macdonald of Clanronald, the proprietor of ſeveral iſlands upon the weſtern coaſt of Scotland, no ſooner heard of the deliberations of the Society upon this ſubject, than he made an offer to appropriate ſome of the ſmaller iſles belonging to him, for the purpoſe of enabling the Society to make ſuch experiments for improving the quality of wool, as they ſhould judge proper.

In the abſence of the Duke of Argyle, who had not then returned from Italy, Mr. James Ferrier, his agent at Edinburgh, made a ſimilar offer on the part of his Grace; as did Mr. Iſaac Grant, in the name of Mr. Campbell of Shawfield, the proprietor of the extenſive iſland of Iſlay, and its dependencies.

Mr. Campbell having been informed of the poſſibility of getting ſome of the beſt breed of Shetland ſheep, by the aſſiſtance of the Gentlemen who were examined before the Committee, requeſted Dr. Anderſon to endeavour to procure for him, by their means, ſuch a number of the very beſt ſort of theſe ſheep, as might be proper for trying a fair experiment, how far they would anſwer in the weſtern iſlands. A ſcore of ewes, and five

the ſame time, given directions for ſelecting ſome of the fineſt wooled ſheep in the Hebrides, for the purpoſe of making a compariſon between the two breeds; and in order that the effect of a croſs breed between them may be tried *.

In conſequence of the attention paid to this ſubject by the Highland Society, the different proprietors in the northern and weſtern iſlands, who have had an opportunity of communicating their ſentiments to the Committee, have expreſſed the greateſt zeal and eagerneſs for promoting the meaſures recommended in the Report. It is certain, that they are more deeply intereſted in their ſucceſs, than any other ſet of men, as there are no means by which the value of their property can be ſo rapidly increaſed, fine wool being an article of much ſurer ſale, of much greater importance, and much more eaſily tranſported, than the droves of black cattle on which they now principally depend. At the ſame time it may be remarked, that there is no individual who ought not to feel an intereſt in theſe inquiries. It is only by bringing to the greateſt poſſible behoof the natural advantages of a country, that a nation can proſper. A truly zealous and public ſpirited citizen, therefore, above narrow or local prejudices, will feel as ardent a deſire to promote the improvement of the moſt diſtant part of the kingdom, as of the diſtricts with which he is more immediately connected.

* Amongſt other exertions, tending to the improvement of wool in theſe kingdoms, though unconnected with the meaſures here propoſed, it deſerves to be mentioned, that Colonel Fullarton of Fullarton has lately imported into Britain ſome of the Colchis breed of ſheep, whoſe *golden fleeces* are ſo much famed in ancient ſtory; and that ſome ſheep of the Thibet breed, alſo, are likely ſoon to viſit Scotland.

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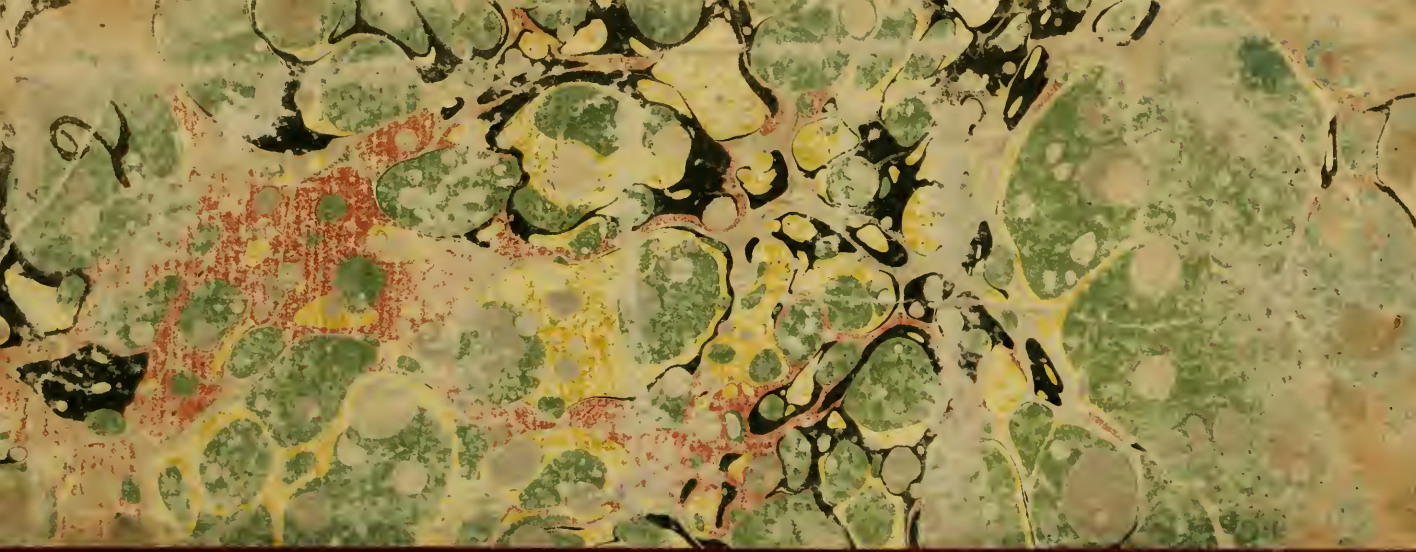
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